## UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WISCONSIN

WISCONSIN RESOURCES PROTECTION COUNCIL, CENTER FOR BIOLOGICAL DIVERSITY and LAURA GAUGER,

Plaintiffs,

-vs-

Case No. 11-CV-45-BBC

FLAMBEAU MINING COMPANY, INC., Madison, Wisconsin

May 21, 2012

Defendant.

9:00 a.m.

STENOGRAPHIC TRANSCRIPT OF FIRST DAY OF COURT TRIAL MORNING SESSION HELD BEFORE DISTRICT JUDGE BARBARA B. CRABB,

## APPEARANCES:

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1 - A - 2For the Plaintiffs: Center for Biological Diversity 1 BY: ATTORNEY MARC FINK 2 209 East Seventh Street Duluth, Minnesota 55805 For the Defendant: DeWitt Ross & Stevens, S.C. BY: ATTORNEYS HARRY VAN CAMP and SCOTT PALER Two East Mifflin Street, Ste. 600 Madison, Wisconsin 53703 Susan George - Paralegal For the State Wisconsin Department of Justice 8 of Wisconsin: BY: AAG THOMAS J. DAWSON 17 West Main Street 9 Madison, Wisconsin 53703 10 Also present: Fred Fox 11 12 I-N-D-E-X 13 PLAINTIFFS' WITNESSES EXAMINATION PAGES 14 DR. JOHN COLEMAN Direct by Ms. McGillivay 32-80 Cross by Mr. Van Camp 80 - 11815 E-X-H-I-B-I-T-S 16 IDENTIFIED/RECEIVED **EXHIBITS** 17 Photo - culvert 53 66 18 Exhibit 11 12 Photo - CPL 74 75 75 19 15 Photo - CPL 76 Photo - CPL 77 77 16 20 74 Photo - biofilter 63 76 Photo - biofilter 64 71 69 21 80 Photo - biofilter 71 70 81 Photo - biofilter 71 22 82 Photo - Stream C 72 73 1002 43 Work Plan 66 23 1015 Figure-Work Plan 46 66 1016 Figures 43 66 24 1024 Figures 54 Requests for Admissions: (Received) 34, 56, 284, 473, 25 479, 481, 485, 489, 493, 495, 497, 508 and 528

(Call to order)

THE CLERK: Case Number 11-CV-45-BBC.

Wisconsin Resources Protection Council, et al. v.

Flambeau Mining Company is called for court trial. May we have the appearances, please.

MS. MCGILLIVAY: Good morning, Your Honor. On behalf of Wisconsin Resources Protection Council, The Center for Biological Diversity and Laura Gauger, I'm Pam McGillivay. With me is David Bender and James Saul of McGillivray, Westerberg & Bender. Also with me is Kevin Cassidy of the Pacific Environmental Advocacy Center at the Lewis & Clark Law School. Also with us today are co-counsel Dan Mensher and our law clerk Liz Brumfeld, also from the Lewis & Clark Law School. And co-counsel Marc Fink from The Center of Biological Diversity. And with us is Laura Gauger, plaintiff and a member of CBD and WRPC.

THE COURT: Thank you. If you would just remember to stay seated in the future. I know it's hard not to stand up; that you have drilled into you the fact that you should be standing when you're in court. But we ask you to stay seated, use the microphone because we have streaming audio throughout the courthouse and there are a lot of interested people.

Mr. Van Camp.

MR. VAN CAMP: That's nearly impossible, Your Honor.

THE COURT: You can do it.

MR. VAN CAMP: I will try to remain seated. It has -- I've had many years of standing at every opportunity. So good morning, Your Honor. My name is Harry Van Camp and I represent the defendant in this case, Flambeau Mining Company. Flambeau is represented by Mr. Fred Fox. And also from DeWitt Ross and Stevens, representing Flambeau Mining Company, is Attorney Scott Paler. And we're assisted by Susan George.

I would also like to note that Attorney Tom Dawson is here representing the State.

THE COURT: Thank you.

MR. DAWSON: May I address the Court?

THE COURT: You may.

MR. DAWSON: Should I come to the microphone?

THE COURT: Sure.

MR. DAWSON: I'm Assistant Attorney General Thomas Dawson. I'm here solely for the purpose of representing the Department of Natural Resources witnesses who have been called in this case. I don't envision an active role here; however, if there is an issue such as the attorney/client privilege that may come up, I may want to object. But I am hoping that my

involvement in this case will be minimal.

THE COURT: Okay. Thank you.

MR. DAWSON: Thank you.

THE COURT: All right. Now Ms. McGillivay and Mr. Van Camp, do you wish to make any kind of opening statements? You certainly don't need to, but if there's something you want to say before you start, that's fine.

MS. MCGILLIVAY: Your Honor, we have a few preliminary matters. First, if you don't -- by your leave, since we filed a motion on -- to supplement our exhibit list on Friday, late in the day on Friday, we've had an opportunity to discuss that motion with defense counsel and we've reached a stipulation as to those late identified exhibits, that they would be stipulated to as admissible into evidence in exchange for defendant's exhibits, some other photographs which are Exhibits No. 633 to 641, which we've also stipulated to admissibility on.

THE COURT: All right.

MS. MCGILLIVAY: And one other -- I guess a couple other matters, Your Honor. When defendants refiled their exhibit lists on the 16th, the numbering was off one for most of the exhibit numbers, so our objections that we filed on the 15th are off by one up to a certain number. Does the Court prefer us to refile

our objections or just go with our objections as we read them  $\ensuremath{\mathsf{--}}$ 

THE COURT: I'll try to adjust.

MS. MCGILLIVAY: Okay. And we also would like to move in the stipulated facts into the trial record that were filed by the parties in the pretrial statement and we would like the Court's guidance on two matters.

The first is we have Requests for Admissions, 13 of them, that we would like entered into the trial record and would ask for guidance whether you would like us to have those read into the record or just to identify the numbers that we'd like moved into evidence?

THE COURT: Okay. First of all, I assume there's no objection to the stipulation of facts being part of the record.

MR. VAN CAMP: Correct.

THE COURT: Okay. Then as to the admissions, is there any objection to those admissions?

MR. VAN CAMP: No, there's not an objection, but I do believe that it might be helpful if they're read into the record simply so that at the point in time that they are material, they become a part of the record rather than being extraneous.

THE COURT: Would you be willing to do that, just read them in as they become relevant? Or I assume

you wanted to put them all in as a group right away.

MS. MCGILLIVAY: Yes. They're -- because of the stipulations, they don't actually flow in a concise way. So I guess what we thought we would do is read them into the record, either all at once at the beginning of the trial or at the end.

THE COURT: Why don't we do it this way: I'll assume they're all part of the record. If at any point you think it would be helpful to the flow of your narrative or your questioning if you want to read in an admission at that point, go ahead.

MS. MCGILLIVAY: Okay. Thank you. And Your Honor, one further matter and that is the plaintiffs have designated portions of the deposition transcripts of defendant's expert Elizabeth Day. We've talked to defendant's counsel about taking Ms. Day out of order so that the Court would have the full context of her testimony prior to us closing our case—in—chief. I believe that the defendants would prefer us to have our snippets from those depositions read in first and then close our case. But we'd like the Court's guidance on that matter.

THE COURT: Well, she's not available for trial at all, is she?

MS. MCGILLIVAY: That's correct, she is only by

video deposition.

THE COURT: So the question is whether you'd be putting in her entire videotape deposition.

MS. MCGILLIVAY: Plaintiffs are not moving in the entire videotape deposition. Defendant's counsel has designated the entire transcript. But there are two transcripts. Plaintiff had designated portions of an earlier transcript as well and they're -- both in their designations and counterdesignations.

THE COURT: So you want to put in the earlier deposition portions that you had marked  ${\mathord{\hspace{1pt}\text{--}}}$ 

MS. MCGILLIVAY: Correct.

THE COURT: -- as part of your case-in-chief, and you also want to put in some parts of the deposition that she gave more recently.

MS. MCGILLIVAY: That's correct.

THE COURT: During your case.

MS. MCGILLIVAY: That's correct.

THE COURT: That would be all right with me.

And Mr. Van Camp, after you've put in those portions of the deposition, we can argue about whether you want any other portions for the sake of completeness or if you want to set it off and do the whole thing as part of your case.

MR. VAN CAMP: Okay.

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MS. MCGILLIVAY: I think we'll introduce those
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    at the end of our live witnesses.
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             THE COURT: Okay.
             MS. MCGILLIVAY: And with that, James Saul is
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    prepared to give a short opening statement.
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             THE COURT: All right.
             MR. VAN CAMP: May I address one of the issues
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    that was just discussed?
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             THE COURT: Oh, sure.
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             MR. VAN CAMP: There are literally hundreds of
    admissions or Requests for Admissions in this case and
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    it would be, I think, helpful for the record if a single
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   exhibit was admitted that had the admissions that were
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    -- that are being moved in by the plaintiffs, and if
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    they're willing to do that, if we can just consolidate
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   that into one short exhibit.
             THE COURT: That would probably be very
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   helpful.
             MR. VAN CAMP: I would certainly stipulate.
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             THE COURT: It doesn't have to be today that
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   you do that.
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             MS. MCGILLIVAY: Your Honor, I'm prepared to
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    just list off the numbers right now if that would make
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    it easier, just to make it complete on this record, or
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    if you prefer a separate filing, we can do that as well.
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THE COURT: Well, if you want to put in the
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    numbers, I'll take the numbers now and then you'll put
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    in an exhibit that will include all of the admissions
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   that correspond to those numbers?
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             MS. MCGILLIVAY: Yes. So defendants will have
   this information as well. The numbers that we will be
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   moving into the record are No. 34, 56, 284, 473, 479,
    481, 485, 489, 493, 495, 497, 508, and 528.
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             THE COURT: All right.
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            MS. MCGILLIVAY: Thank you.
             THE COURT: Anything else then, Mr. Van Camp?
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            MR. VAN CAMP: No, I think that's all. Thank
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    you.
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             THE COURT: Then Mr. Saul.
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             MR. SAUL: Thank you, Your Honor. Your Honor,
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   this case boils down to--
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             THE COURT: If you want to, you can use the
    lecturn if you'd prefer that. Whichever is more
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    comfortable.
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             MR. SAUL: It is. Thank you.
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             THE COURT: And I should say Mr. Van Camp, you
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    can stand up any time if you use the lectern.
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             MR. VAN CAMP: Thank you very much.
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             THE COURT: If that makes you feel better.
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            MR. VAN CAMP: Thank you.
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MR. SAUL: Your Honor, this case boils down to 20 feet. That is the distance from the biofilter berm to the channel of the waterway that defendant has long identified as *Intermittent Stream C*.

As will become apparent over the next several days, this intermittent stream channel provides a conveyance of polluted stormwater and a chemical, physical and biological nexus between those waters and wetlands upstream of Copper Park Lane and Stream C and the Flambeau River below Copper Park Lane. Plaintiffs will prove defendant's Clean Water Act liability under several overlapping but independent theories.

First, plaintiffs will show that defendant's biofilter discharges flowed through that narrow strip of wetland identified as Wetland 7 into the channel of Intermittent Stream C and into that portion of Stream C south of Copper Park Lane that the Court has already found to be a water of the United States.

This discharge and flow path has been observed on a number of indications by eyewitnesses who will testify today and tomorrow. Defendant has admitted this flow path for over a decade in almost every conceivable form, include permit applications, annual reports, communications with members of the public, internal memoranda to and from contractors, and private email

messages.

Testimony from plaintiffs' retained hydrologist,

Robert Nauta, will confirm that polluted discharges from

the biofilter travel the short flow path from the

biofilter to Stream C, south of Copper Park Lane,

thereby establishing liability.

Plaintiffs will also show that the waterway north of Copper Park Lane is itself a water of the United States for three reasons. The first is that the stream north of Copper Park Lane is a natural extension of Stream C, south of Copper Park Lane, and is jurisdictional for the same reasons that the Court found Lower Stream C to be jurisdictional. It is a tributary to the Flambeau River. It has defined bed and banks, seasonal flow, and delivers both water and pollutants to the Flambeau River.

Next plaintiffs will show that Wetland 7 is adjacent to Stream C because it has a continuous surface connection with the stream. That connection is provided by the culvert underneath Copper Park Lane, which enables flow to pass under the lane and into Lower Stream C. As argued by plaintiffs in our trial brief, that adjacency pulls Wetland 7 into the scope of the significant nexus determination the Court has already made.

And finally, plaintiffs will prove that Wetland 7, alone and in combination with other wetlands and drainage ways in the Stream C watershed, affects the physical, chemical and biological characteristics of Stream C and the Flambeau River such that even if the discharges from the biofilter were able to overcome the pull of gravity and get no further than Wetland 7, liability would still be established.

Testimony from several witnesses will show that
Wetland 7, much like Intermittent Stream C, contributes
both water and pollutants to Stream C and the Flambeau
River creating both a physical and chemical nexus.
Testimony from other witnesses will establish the
biological relationships between the wetlands and the
Stream C watershed, including Wetland 7, Stream C, and
the Flambeau River through the delivery of various
constituents that affect the health and composition of
aquatic life in Stream C.

Over the next several days, defendant's Clean Water Act liability will become crystal clear. Thank you.

THE COURT: Thank you. Mr. Van Camp, did you want to say anything?

MR. VAN CAMP: Yes, I will. Thank you. Good morning, Your Honor. Counsel. It is absolutely an honor for me to represent Flambeau Mining Company before

this court in this case. What's begun here today is a search for what has happened in a very, very small wetland at the Flambeau Mining site.

Before I address that particular wetland and the facts that will be proven, I'd like to give the Court a short few-minute background of the facts that led Flambeau Mining Company to the defendant's table in this courtroom. When Flambeau Mining Company came to the State of Wisconsin, they came to mine central metals, metals that are used by every one of us every day all the time. Copper. Zinc. Metals that we rely on for various activities: The wiring in our home, and so forth.

But they also came to the State of Wisconsin to be a good partner. They came to the State of Wisconsin to be a good neighbor. And as the evidence will demonstrate throughout this trial, it was their effort to be a good neighbor that has brought them into this courtroom. Flambeau understood before they came to the State of Wisconsin that Wisconsin was a very carefully regulated state. The citizens of the State of Wisconsin were very concerned about their environment. Flambeau Mining Company knew, when it came to the State of Wisconsin, that a concerned, capable, vigilent regulatory agency, the Wisconsin DNR, would carefully

monitor their activities.

You will hear in this trial testimony from many WDNR employees who did, in fact, vigilantly oversight or did vigilant oversight for this mining operation. They received permits. Flambeau Mining Company originally received permits of many kinds: Air permits, water permits, discharge permits, mining permits, and so forth.

The evidence in this case will show that they did not violate those permits. It's interesting that this case is not a dispute in a highly regulated state between the regulated and the regulator. They're on the same side in this case. The facts that they will present to this Court will be the same.

From the beginning, Flambeau Mining Company has complied with the stringent requirements of its permits. If and when minor problems were identified, they were addressed readily by FMC. They were fixed. This is true both during the mining operation and reclamation.

FMC was a good neighbor. The plaintiff in this case is not a local community. The plaintiff in this case is not a local citizen. This is not a case about local complaints where the evidence will show that there are problems with the local water or resources. In fact, the community witnesses in this case will testify

about how Flambeau Mining Company helped the community, how they provided good high paying jobs, provided money for local schools, libraries, fire departments, and recreation.

Interestingly, Your Honor, the only truly local witness who has an interest in the outcome of this case will be testifying in this case as a result of a subpoena sent to them by Flambeau Mining Company. This is Mr. Harold Flater. Mr. Harold Flater signed an affidavit or a declaration for standing in this case. I think the evidence will show that he didn't have personal knowledge about the matters in that, but he did absolutely have personal knowledge about some matters very relevant to this case.

He is a resort owner. He owns a resort on the Flambeau River at the confluence of the Flambeau River and the Chippewa River. He has lived there for 70 years. That resort is just downstream from the Flambeau Mine site. And what he will tell you is he has been fishing on that river all his life. He will tell you that the river has been cleaned up and that fishing today is as good as it was in the 40s. He's very proud of the Flambeau River and the fishing that he provides for both himself, his friends and his clients.

What the facts will show or will not show is any

local damage. There will be no evidence of any local damage whatsoever. Plaintiffs will not be able to show any damage to any living things, from micro or macroinvertebrates, to fish, to birds, to amphibians, nothing. In fact, the plaintiffs hired no experts in this case to demonstrate damage. They have no witnesses that they will present to demonstrate any damage whatsoever.

Even though Flambeau doesn't have the burden of proof in this case, it will prove the opposite. It did hire experts to examine the situation, both biological and chemical, and determine that no damage occurred. So if Flambeau was a good neighbor --

THE COURT: Excuse me, Mr. Van Camp. You will have the burden of proof because those things go to mitigation, whether there should be a large fine or a small fine or any fine at all.

MR. VAN CAMP: You're absolutely correct. I was thinking about the liability phase and we're not going to present those witnesses in the liability phase and so I retract that; that we will have the burden of proof and we will demonstrate through experts that, in fact, there was no damage to any sort of biota or anything.

If this is the case, why is Flambeau here in this

courtroom as a defendant? Flambeau is here because they desperately tried and worked hard at being a good neighbor to the Ladysmith community. It was Flambeau's willingness to modify their original Reclamation Plan in order to contribute to the community that brought about the problems that we're here in this court to decide.

In the original Reclamation Plan, the entire mine site was going to be reclaimed. It would once again become forests, wetlands, prairies, trails, and so forth. There would be no buildings that they used for the mining operations remaining.

Before I get into the agreement that was reached between the community, environmental interests, the DNR, and Flambeau Mining Company, I'd like to draw the Court's attention to three photographs that I think at least demonstrate where we've come since they began their mining operations. Can you pull up 633. Can you see this over here?

THE COURT: It's just as good on the screen, but yes, I can see it.

MR. VAN CAMP: The photograph in Exhibit 633 is a photograph, an aerial photograph of the area that became the Flambeau Mine site just south of Ladysmith. The highway that you see crossing the lower left-hand corner of the photograph is Highway 27. As it goes up

in this photograph, it's headed directly south, and what you see in the upper left-hand corner and then winding across the top of the photograph is the Flambeau River. This is the way the location of the Flambeau Mine site appeared before mining began.

Can we go to 634. Exhibit 634 is a photograph, once again an aerial photograph. Once again, you can see Highway 27 crossing the lower left-hand corner of that photograph. This is looking essentially south, probably south and slightly west. You can see the Flambeau River at the top of the picture and you can see the mining pit where the incredibly rich ores were mined and removed by Flambeau Mining Company.

During mining operations, the ore was not processed at this location, it was taken by rail. And the rail spur is right under the buildings at the upper left-hand corner. And the rail cars you can actually -- I don't know if you can actually see them in the photograph before you, but there are rail cars that were loaded with ore and I think taken to Canada for processing.

Above that, just before the property turns to woods again, are some buildings, and those buildings were the buildings utilized by Flambeau Mining Company for the operation of the Flambeau mine. I will -- I think I can draw on this. Is there a red circle? Okay.

THE COURT: Um-hmm.

MR. VAN CAMP: I've put a red circle around what was a surge pond during the mining operation, and that surge pond collected runoff and wastewater from the mining operation and then it piped it back to the furthest building on the right, which was a water treatment facility.

So during the mining operation when there was a PDES permit, Flambeau Mine had a permit to discharge water after it was treated at the treatment plant directly into the Flambeau River. And as the evidence will show, the copper and so forth that could be discharged pursuant to that PDES permit far exceeded anything that is at issue in this case.

It is those buildings and the area where that surge pond is located that are at issue in this case. And as you'll see in the next photograph, the rest of that site, the entire site was reclaimed after the mining operation was completed.

THE COURT: And that -- the mine was in operation what, five years? Four years?

MR. VAN CAMP: Right. In the '93-'96, -7 period.

THE COURT: And that was sufficient to take out all of the ore that was available?

MR. VAN CAMP: Well, I think there is probably some more ore there. That was the plan. This was the size of the site. That was plenty of time to remove the ore that they intended to remove and that was permitted for removal.

635 is a photograph, again an aerial photograph, taken of the Flambeau mining site, again just south of Ladysmith. For reference, Ladysmith would be a mile or so off to the lower right-hand corner. Again, you can see the Flambeau Mining Company -- I'm sorry, the Flambeau River crossing the upper right-hand part of the photograph. And the area that is at issue in this case, even on the photograph that is -- the large photograph that I have on the easel, I can literally cover the area with my finger. And because my -- oops -- because my finger is a little too large for the photograph, I'm going to show you on this larger photograph where it is that I'm looking. (Indicating)

I will -- now I'm going to draw a circle around the area that basically has become known as the Industrial Outlot and discuss that. (Indicating) It's not on the photograph, but it should be on your screen. Again, a red circle that shows the Industrial Outlot.

As mining operations were coming to a close and the plans and so forth for the reclamation were beginning,

the local Ladysmith community recognized there were some valuable buildings in the area that had been used or were at the time being used by the mine, and the community approached Flambeau Mining Company requesting the use of those buildings, asking them not to tear those buildings down and instead leave them so that they could be used as an Industrial Outlot for future development.

It was, in fact, to become and did, in fact, become a source of local revenue. It is rented, I believe, for \$10 a year by the Flambeau Mining Company to a development corporation, which then rents it out. One of the major tenants — if you look at those buildings, one the major tenants in one of the significant buildings on that property is the DNR. And I think that's important because I think it demonstrates not only the openness that Flambeau Mining Company operated under during the mining operation, but also the openness with which they operate even today.

Originally when the Plan was modified in order to allow these buildings to be used by the local community for an industrial park, the water treatment plant was going to be retained so that there would be a plant through which any water treatment that was required could be done. For some reason, the plaintiffs in this

case, Laura Gauger, members of the WRPC, didn't want that water treatment facility to remain. They went to hearings about the modification; that is, the modification that would allow this property to be used by the local community, and they objected to the retension of that water treatment facility.

In an agreement that was reached between the community, environmental interests, the DNR, and Flambeau Mining Company, the water treatment plant -- the building was retained so that they could use it, but all of the water treatment facilities were plugged up and removed.

Water treatment then for runoff was shifted under a plan approved by the DNR to a biofilter system. And you can see on Photograph 635 there is a dark square in the upper left-hand portion of that area and that's the .9 acre biofilter.

Now, the only thing directed to that would be the stormwater runoff from the Industrial Outlot, from the roofs of the buildings there, from the parking lots of the buildings, and from the area around there, a few ditches and so forth. Those were to go into the biofilter. The biofilter was intended to allow anything in the water that went in there to drain to the bottom or to settle. And then on occasion in very heavy rains

or snow melt situations, there would be a little bit of a discharge.

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Stormwater management, the DNR indicated, would be handled under the mining permit. As the evidence will show, the mining permit issued was more stringent than a PDES permit would have been. The DNR elected to do it under the mining permit because they had more resources to monitor it and because they had a more powerful tool to regulate it. Flambeau complied. There were some concerns that arose after the area was designated as an Industrial Outlot, and as each of those concerns of a particular area or something indicated that there was more copper or zinc than they had anticipated, it was studied by both Flambeau and the mining company, discussions were had, decisions were reached about what to do about it, and FMC then enhanced the reclamation they had already done by doing such things as removing a rail spur, taking all of the dirt out of ditches close to roads and replacing them, they paved the parking lots so that -- I mean after excavating, taking away materials in the parking lots. They put down crushed limestone. They put down asphalt and so forth to correct it.

The evidence that you will see in this case even presented by the plaintiffs in this case is that

throughout this period, as the DNR and as Flambeau learned, less and less and less stormwater runoff contributed copper or zinc to the biofilter.

Just momentarily I'd like to talk or just for a moment I'd like to talk about permits. By the time the modification that allowed the change from total reclamation of this property to the operation of the Industrial Outlot for the local community, DNR and Flambeau Mining Company had been working together for over ten years. After meetings and discussions, it was determined that the modification would be acceptable and that permits under the mining — I mean permits that would involve wastewater treatment or runoff, stormwater runoff, would be handled under the DNR mining permit.

Throughout this time, WDNR was the agency in Wisconsin authorized to issue both mining permits and PDES permits. They were a fully delegated regulatory agency under the Clean Water Act. Flambeau Mining Company believed they had the permit for the stormwater runoff that they needed. WDNR still believes that.

Since there will be no evidence of harm, the WDNR employees that will testify will testify that the reason the mining permit was the better permit is because of staffing, regulatory authority, monitoring ability, and control.

The summary judgment order in this case determined that Flambeau had the wrong permit. It determined that Flambeau Mining Company needed a PDES permit if there's federal jurisdiction under the Clean Water Act. And what that comes down to is evidence in this trial of an infrequent discharge of a unknown amount of water, but at best very little. The discharge was infrequent. And the question becomes whether or not the wetland into which any of that discharge might have gone has a significant nexus to the Flambeau River. The Flambeau River is the closest traditional navigable water.

In the decision there will be two words: nexus and significant. The testimony in this case will demonstrate that out of thousands of days over many years, there were maybe a dozen or two overflows from the biofilter. There were less than ten observed by any witnesses in this case.

Flambeau Mining Company has been an open book. They are the ones that have done most of the monitoring. They have published their monitoring results to the DNR and to the public and to the plaintiffs. The DNR has done some testing and they have published their test results to Flambeau, to the plaintiffs, to the public.

The plaintiffs in this case retained two experts.

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The two experts were retained to review the results from the samples that were taken by Flambeau Mining Company and the DNR. That's what they did; to determine the level of toxicity, and they will be able to testify about those samples. What they were not retained for, what they're not qualified for and what they will not be able to testify about is the connection between the biofilter, the wetland, Stream C, or the Flambeau River. Neither will they be able to identify any tests that they took to determine that; any measurements that they took to determine that; the volume of flow in any of these locations, whether it be between the biofilter and the wetland, the wetland and other parts of the wetland, the wetland and Stream C, whether it be above or below Copper Park Lane, and certainly the Flambeau River are unknown; the effect of the fact that Stream C is what's known as a losing or declining river, which you will hear testimony about, meaning that there are places in Stream C where there is flow and then it goes into groundwater where there is no flow and then reappears later as surface flow. There are no tests, there are no measurements, and there are no expert witnesses that can testify about the transport of anything from the biofilter of the wetland to Stream C or the Flambeau River. There are no dye tests that follow flow from one

place to another, and there are no other tests or studies that study that.

The plaintiffs won't be able to prove where the water in photographs you're looking at comes from or where it goes. Neither did the experts for the plaintiff do any groundwater level testing. So whether the water coming out of the biofilter infiltrates into the ground or whether groundwater percolates up and the effects of that are entirely unknown.

Neither are there any tests to determine the effect of this small wetland on anything. There are no tests conducted to determine whether it removes metals, adds metals, filters metals, does anything to them. Because the plaintiffs didn't hire experts to testify about this, I think they will put on evidence that is a smattering of observations over a few occasions by people who are probably qualified to do the tests that were never done. So they won't testify as scientists about tests that they performed and the results of tests and studies.

You will hear about dissolved oxygen and dissolved organic matter. And you will hear speculation about whether or not that dissolved oxygen or dissolved organic matter originated in this wetland. But nobody did any tests to determine whether the dissolved oxygen

in the wetland was the same or similar to the dissolved oxygen in Stream C south of Copper Park Lane.

The same goes for the dissolved organic matter. Nobody did any tests to determine whether that matter was the same.

You heard about Mr. Nauta and what he will testify to. He prepared his expert report before he ever went to the property. He took no samples. He studied the data about the toxicity and wrote a report.

You will hear from unretained experts called by the plaintiffs, Mr. Coleman and Mr. Roesler. They will tell you that on certain occasions they saw flow. Once again, significant is a key. This visual inspection occurred on very few days over very few years. There were no tests associated with those other than tests that were taken by Mr. Roesler related to a report on the quality of the water, and you will see that report and you will learn that the purpose of the report had nothing to do with determining a significant nexus, it had to do with determining the effects of toxicity. And even in his executive summary at the very beginning he will inform the Court that there was no apparent damage or harm caused by any of this.

Also Mr. Coleman -- Dr. Coleman, I'm sorry, viewed the same thing. You've seen it a number of times.

There apparently was some confusion at his deposition about what he would testify about, but he has visited the site. But many of the visits you will hear were prior to the five years preceding the filing of the complaint. And in addition, his observations were the type of observation that are not reliable because they aren't based on scientific evidence or tests.

Now I think I've run a little long. Rather than going through Mr. Roesler's report at this point in time, we will look at that, but I would ask you to look for it. It's Joint Exhibit 1028. It's called a Surface Water Quality Assessment done by Mr. Roesler in 2012. In that report, while he studies the toxicity and water quality and various things, he didn't study the wetland. He basically ignored the wetland. He did tests in the biofilter south of Copper Park Lane, but not in between. There is no study anyplace of the wetlands' effect on copper or zinc.

This Court is going to be charged with determining what was going on in that wetland. The evidence will not demonstrate that anything was going on because there isn't evidence about it, and as a result, the Court, I don't believe, will be able to determine that there is any nexus, much less a significant nexus, between the biofilter, the wetland, Stream C or the Flambeau River.

They didn't study those relationships.

Very briefly: If this Court proceeds to a penalty phase, I think the evidence will be overwhelmingly in Flambeau Mining Company's favor. There will be no evidence of harm. There will be evidence of a good neighbor. It's a beautiful facility. It provides recreation, equestrian facilities, hiking.

Flambeau has throughout been open with all its testing and operations. It has provided monitoring. It has provided remediation repeatedly. Where there have been problems found, it has corrected them. Up to now it has eliminated the discharges completely. There are infiltration basins, three of them. They're all oversized. They are all over the capacity required to handle any storm in Ladysmith's recorded area history.

Flambeau Mining Company has been a model partner for the State of Wisconsin. They have demonstrated repeatedly concern about the environmental interests for the State of Wisconsin. We believe that the testimony from the DNR will agree with that. And if there is any sort of penalty in this case, it should be minimal to reflect the truth about Flambeau's operations in the State of Wisconsin, Flambeau's efforts to protect Wisconsin's environment, and plaintiffs' efforts to be the good neighbor that brought them to this courtroom by

agreeing to change their Reclamation Plan to the 1 2 Reclamation Plan that left those buildings for the 3 people in Ladysmith. Thank you. THE COURT: Thank you. Ms. McGillivay, you may 5 call your first witness. 6 MS. MCGILLIVAY: Thank you, Your Honor. 7 Plaintiffs call Dr. John Coleman. 8 JOHN COLEMAN, PLAINTIFFS' WITNESS, SWORN, 9 DIRECT EXAMINATION 10 BY MS. MCGILLIVAY: Good morning, Dr. Coleman. Can you please state 11 12 your full name. John Samuel Coleman. 13 Α 14 And by whom are you currently employed? Great Lakes Indian Fish and Wildlife Commission. 15 16 0 Does that go by the acronym GLIFWC? 17 Α Yes, it does. 18 Q And can you just describe generally what GLIFWC? GLIFWC is a natural resource agency. It has eleven 19 20 member tribes, Chippewa tribes, in Michigan, Wisconsin and Minnesota. GLIFWC serves to assist those member 21 22 tribes in monitoring and managing natural resources in 23 what's called the ceded territories which are 24 territories that were ceded to the U.S. government in 25 1836, 1842, 1837 and 1854.

JOHN COLEMAN - DIRECT

Q Ceded by the tribes?

A Ceded by the tribes under a variety of treaties.

Q And what is your current position with GLIFWC?

A My current position is I'm the environmental section leader and I direct a small number of employees in the environmental section.

Q What does the environmental section do?

A The environmental section looks at environmental quality. We have a program looking at mercury contamination in a variety of tissues that are of interest to the tribes, particularly fish tissues. We have a mercury and other toxicants program; an employee working on that. We monitor environmental quality such as water quality; contaminants in plants and animals. We also review mine projects, significant mining in the region, particularly in Michigan and Minnesota. And we review mine projects looking at potential environmental impacts.

We are the section that works mostly with our member tribes that are -- we have some member tribes that are cooperating agencies on environmental impact statements for mining projects, and so the environmental section works with those member tribes to assist them on technical issues related to environmental impacts and proposed mining projects.

JOHN COLEMAN - DIRECT

1 - A - 34

```
How long have you had the position of environmental
 1
 2
    section leader at GLIFWC?
         I started working for GLIFWC in 1994 and I think it
 3
 4
   was in '96 or '97 that I became environmental section
 5
    leader. My position did not change substantially at
 6
   that point.
 7
         Let me refer you to your monitor and there should
 8
   be an Exhibit 73 displayed.
 9
   Α
         Yes.
10
         And do you recognize that document?
         I do, although I may have to put on my glasses to
11
12
   read some of the print. But...
         Do you have your glasses with you?
13
14
         I do. I think I can handle it at this point. I'll
15
   see.
16
         Okay. Looking at this document, does it refresh
   your recollection when you became the --
17
         Environmental section leader?
18
   Α
19
         Correct.
20
   Α
        Yeah.
         I'll withdraw my question, Dr. Coleman, because it
21
22
   looks like you just have 1994 to present that you
23
   maintain this position.
24
         Yes.
   Α
         Some time in the late 90s you switched over to the
25
```

JOHN COLEMAN - DIRECT

1-A-35

```
environmental section?
 1
 2
        Leader, yes.
   Α
 3
    0
         Okay.
 4
         I acquired those additional responsibilities,
 5
   running the section, as I say, though my day-to-day
 6
   responsibilities did not change substantially.
 7
         Okay. Then let's move back in time to when you got
 8
   your bachelor's degree. What is your bachelor's degree
 9
    in?
10
        My bachelor's degree was in Wildlife Ecology at the
   University of Maine.
11
12
         Okay. And you have a master's degree?
         I have a master's degree in Wildlife and Fishery
13
14
    Science from VPI and SU in Virginia.
15
         In between your -- receiving your master's degree
16
   and your doctorate, did you have occasion to work
17
   professionally?
        I had one professional -- well, two jobs actually:
18
   one was working for the Florida Fish and Gaming
19
20
   Commission on the Kissimmee River looking at --
21
   Kissimmee River had been channelized by the Army Corps
22
   of Engineers and there was an effort to revitalize that
23
   river valley by redirecting water into abandoned river
24
    channels. And so we were doing studies of fish
25
   populations and vegetation as those channels were
                    JOHN COLEMAN - DIRECT
```

receiving fresh influxes of water from the redirected canal.

Also worked at a research lab in France for a short period of time looking at the use of molecular techniques to do wildlife research.

- And when did you receive your doctorate?
- I received my doctorate from the University of Wisconsin and that would have been in 1994.
- What do you hold a Ph.D. in?

1

2

3

4

5

6

7

8

9

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

- 10 My Ph.D. is in Wildlife Science. I had a minor in Statistics.
  - Can you just briefly describe what wildlife science -- what the field is?

It's a pretty broad field. Some of it involves -at this point there's -- in that department there's a significant toxicology aspect to that, to that field. Traditionally it's game management. Sometimes wildlife ecology can involve fisheries management. And so in the department, similar department in Virginia, they had a fisheries department. It's also often combined with forestry departments, so there's a significant vegetation management and manipulation aspect.

It can -- as I said, traditionally it's very much wildlife management, but has evolved to wildlife conservation and study, endangered species restoration, JOHN COLEMAN - DIRECT

and a number of DNR employees have come through that department and they work in a variety of fields. The Mercury Program at the DNR is staffed partly by my graduates from that department.

- Q Okay. Now I want to speak specifically to your experience professionally with the Flambeau Mining site. When did you first become involved with issues related to the Flambeau Mine?
- A I would say that I was aware of the Flambeau Mine since the time of permitting, but I didn't become professionally involved until the time that the project came close to closure. In 1997/'98, I was asked to look at that project and look at the environmental data that was coming out of that project, and so I began reviewing reports and documents coming from the DNR and from the mining company.
- Q When you say you were asked to look at the Flambeau Mining Company's reports, by whom were you working on --
- A My employer. It became one of my tasks as part of my job.
- Q Okay. And in your professional capacity, have you had occasion to visit the Flambeau Mine site?
  - A I have, on a number of occasions, I have visited the Flambeau Mine site, both on my own and in the company of the DNR and then once during a contested case JOHN COLEMAN DIRECT

1-A-38

```
field trip.
 1
 2
         What do you mean by a contested case field trip?
 3
        There was a certificate, I think it was a contested
   case, exactly the legal standing of that I'm not sure,
 4
 5
   but it was an application for a certificate of
 6
   completion by Flambeau Mining Company and there was, I
 7
   believe, what was a contested case related to that and
   there was a field trip with the parties and the hearing
 8
   examiner to the mine site in 2007.
 9
10
        Okay. I'm going to direct you back to your
   monitor. Do you recall preparing a declaration for the
11
   plaintiffs in November of 2011 for this case?
12
13
   Α
        I do.
14
        And what is on your monitor? Is this a copy of
   that declaration? I'll scroll down.
15
16
        It certainly looks like it. It's going by very
17
   quickly.
18
        I just wanted to show you --
19
             THE COURT: Don't look at it.
20
   Q
        -- your signature.
21
         I may get sea sick here.
   Α
22
         Is that your signature?
   Q
23
        Yes, that is my declaration.
24
         Okay. I'm going to direct you to paragraph 6 of
25
    that declaration.
                    JOHN COLEMAN - DIRECT
```

I have a hard copy here. It would be easier for me 1 Α 2 to look at this than the screen. Okay. Thank you. 3 0 MR. VAN CAMP: Your Honor, may I approach just 4 5 to look at the document the witness is looking at? 6 THE COURT: You may. MR. VAN CAMP: I certainly don't object to this 8 witness using a paper copy of the document, but this 9 particular paper copy has changes and writings and 10 things on it and unless it's going to be introduced and we're given copies of it, I don't believe it should be 11 12 used. THE COURT: I agree. You better get your 13 14 glasses out. 15 THE WITNESS: Okay. 16 THE COURT: And if you're going to be scrolling 17 through the document, give us advance warning so we can 18 look away. MS. MCGILLIVAY: Getting used to the 19 20 technology, Your Honor. Your Honor, plaintiffs have no 21 objection to marking Dr. Coleman's paper copy as an 22 exhibit, if that's preferable. 23 MR. VAN CAMP: I don't have a copy. The Court 24 doesn't have a copy. I guess I would prefer to have him 25 testify either from -- I mean there are copies within

JOHN COLEMAN - DIRECT

```
the binders of documents, so they can provide him with a
 1
 2
    paper copy if they want.
 3
             THE COURT: I agree.
             MS. MCGILLIVAY: Your Honor, may I approach
 5
   with that paper copy?
 6
             THE COURT: You may.
             MS. MCGILLIVAY: Your Honor, do you need a
 8
    copy, too, or for the witness? I wasn't planning on --
 9
             THE COURT: I'll just look at the screen.
10
   BY MS. MCGILLIVAY:
         Okay. Dr. Coleman, looking at paragraph 6, you can
11
12
   review it to yourself. Does there refresh your
   recollection of what the agency proceeding was in 2007?
13
             MR. VAN CAMP: Your Honor, I'm going to object
14
15
    to this form of question. Apparently she's trying to
16
   refresh the memory about something that hasn't yet been
17
    asked. Sorry.
18
             THE COURT: You have to -- you have to set the
    framework for that.
19
20
             MS. MCGILLIVAY: I'm sorry, Your Honor, I
21
   thought I had when --
22
   BY MS. MCGILLIVAY:
23
        Dr. Coleman, do you recall the certificate of
    completion of reclamation proceedings in 2007?
24
25
        Yes. In reading through paragraph 6, I don't see
    Α
                     JOHN COLEMAN - DIRECT
```

```
that it is any different than what I said earlier
 1
 2
   related to the certificate of completion.
         Is the certificate of completion of reclamation the
 3
 4
   agency proceeding that you were referring to?
 5
        Yes, it is.
   Α
 6
         Okay. And did you file testimony on behalf of
 7
    GLIFWC for that proceeding?
 8
   Α
        Yes, we did.
 9
         In -- I'm going to back up to your visits to the
10
   mine site. Do you recall when your most recent visit
   was to the Flambeau Mine site?
11
12
        My most recent was in 2010.
13
        Do you recall whether it was in June of 2010?
14
             MR. VAN CAMP: Your Honor, I'm going to object
   to counsel leading the witness.
15
16
             THE COURT: Sustained.
   BY MS. MCGILLIVAY:
17
        Do you recall when in 2010 the -- your most recent
18
19
    inspection took place?
20
         I believe it was in the spring of 2010, yes.
         Okay. In your declaration, if you look to
21
22
   paragraph 7 --
23
             THE COURT: You're asking him to refresh his
24
   recollection as to the month in which he visited?
25
             MS. MCGILLIVAY: Correct, Your Honor.
                     JOHN COLEMAN - DIRECT
```

Does that refresh your recollection the date of 1 2 your most recent visit? 3 Well, paragraph 8 makes it clear that it was June 4 10th. 5 You said that you reviewed reports for the Flambeau 6 Mine Company as part of your professional -- as part of 7 your professional work; is that right? 8 Α Yes. 9 Can you describe what type of reports that you 10 reviewed? They're quite a variety. Probably the most 11 12 extensive reports were annual reports produced by Flambeau Mining Company, but there are also reclamation 13 14 reports. There are quarterly water quality reports. That probably covers most of it. 15 16 And are those the types of documents that you 17 typically review in your professional work? 18 Yes, they are, depending on the stage of the mining 19 project that we're looking at or the industrial project 20 that we're looking at, but those are fairly typical for an operating or closing mining project. 21 22 Are you familiar with the Copper Park Business and 23 Recreation Area Work Plan report from May of 2011? 24 I am familiar with it. I'm not intimately. I did 25 not study that report as closely as some of the other

JOHN COLEMAN - DIRECT

reports that we've written -- written summary documents 1 2 related to. Is that a report that you reviewed as part of your 3 4 professional work for GLIFWC? 5 Yes, it is. Α 6 And I'm going to show you on your screen what has 7 been marked as Exhibit 1002. It's 269 pages, so I won't 8 scroll through it. But just going through the table of 9 contents, is this the May 2011 Work Plan that you 10 reviewed? Yes, it is. 11 12 Okay. And attached to, at least according to the 13 table of contents, are a number of figures. Did you 14 review the figures that were attached to this May 2011 Work Plan? 15 16 I reviewed at least the majority of those figures. 17 Okay. I'm going to turn to one of those figures which has been marked as Exhibit 1016. Do you recognize 18 this figure as one of the documents from the May 2011 19 20 Work Plan that you reviewed? 21 Yes, I do. It's very similar to other figures 22 generated for annual reports and other reports by Flambeau Mining Company. 23 24 Okay. Based on your familiarity with the Flambeau 25 Mine sites from your prior visits, does the aerial JOHN COLEMAN - DIRECT

```
photograph, the underlying aerial photograph, fairly and
 1
 2
   accurately depict the Flambeau Mine site?
 3
        At this scale, I wouldn't want to talk about
 4
   details, but at this scale, yes, it appears to.
 5
        And I want to talk to you about some of the bigger
 6
   features on this figure. Are you familiar with this
 7
   section, with the part I just indicated, what that
 8
   represents? (Indicating)
 9
        That line appears to be along Highway 27.
   Α
10
        Okay. And this water body, is that --
        Yeah, is the Flambeau River.
11
12
             THE COURT: If you want him to mark things, he
   can just do it with his finger on his screen.
13
   BY MS. MCGILLIVAY:
14
15
        Okay. Can you indicate where the Flambeau River is
16
   on Exhibit 1016?
        It's that -- is that working?
17
18
        Yes. And how about are you familiar where Copper
   Park Lane is as it would appear on this figure?
20
   Α
       Yes. (Indicating)
21
        I think you have to push a little harder.
   Q
22
   Α
        (Indicating)
23
         Thank you. This section on this figure noted as
24
   the 0.9 acre biofilter, based on your indications where
25
   is the biofilter?
                    JOHN COLEMAN - DIRECT
```

```
This square area right here. (Indicating)
 1
   Α
 2
         And can you identify on this diagram where
 3
    Intermittent Stream C is?
 4
        Well, starting at the --
 5
             MR. VAN CAMP: Your Honor, I'm going to object
 6
   to the form of the question. It needs to be a little
 7
   more precise as we have determined so far --
 8
             THE COURT: Sustained.
 9
             MR. VAN CAMP: -- in this case.
10
             THE COURT: Sustained.
   BY MS. MCGILLIVAY:
11
        Dr. Coleman, beginning south of Copper Park Lane,
12
13
   can you identify where Intermittent Stream C is on this
14
    diagram based on your observations of the Flambeau Mine
   site?
15
16
        I want to make sure I understand the question.
17
    Starting south of Copper Park Lane and going upstream or
   downstream?
18
19
        Downstream.
20
        Okay. At Copper Park Lane, Intermittent Stream
21
   flows through the woods here and exits the Flambeau
22
   River next to another creek.
23
         Okay. Before discussing this section south of
24
   Copper Park Lane, can you identify where the Industrial
    Outlot is on this figure?
25
                     JOHN COLEMAN - DIRECT
```

```
The Industrial Outlot is this area enclosed and
 1
   Α
 2
   marked on the map which I have just outlined.
 3
    (Indicating)
 4
        And the marking then on the figure which is in
 5
   orange is fairly accurately represented as the
   Industrial Outlot?
6
 7
        I believe that to be the case.
8
         I'm going to focus now on that Industrial Outlot
9
   section. Show you what's been marked as Exhibit 1015.
10
             THE COURT: You can remove -- good.
         Have you seen -- have you reviewed before today the
11
   exhibit that's been marked as 1015?
12
13
   Α
        Yes, I have.
14
         Do you recognize it as a figure representing the
15
   Industrial Outlot?
16
   Α
         Yes.
        And I'm going to focus further in on this section
17
   of the Industrial Outlot, the southeast corner of the
18
   Industrial Outlot. I think that there is another figure
19
20
   with just that section. If I show you Exhibit 1024, can
   you identify that figure?
21
22
        Could you repeat the question? With the changing
   of figures, I'm getting a little confused about --
23
24
         Sure. I'm going to turn back to Exhibit 1015 and I
25
   want you to focus on the southeast corner of the
                     JOHN COLEMAN - DIRECT
```

```
Industrial Outlot.
 1
 2
   Α
        Yes.
 3
         I think there's a clearer figure that is marked as
 4
   Exhibit 1024.
 5
        Okay. So I see several different numbers here.
 6
   You got me confused. 1024, yes.
 7
        Do you recognize this section of the Industrial
 8
   Outlot?
 9
   Α
        Yes, I do.
10
        Okay. And have you seen this Figure 2 of the Foth
   Work Plan --
11
12
   Α
        Yes.
13
        -- for today? So now I'd like to talk about the
14
   features that are on this figure. Starting with --
    starting with the section that is at Highway 27, can you
15
16
   identify -- have you observed culverts along this
    section during your visits?
17
             MR. VAN CAMP: Objection. Leading.
18
             THE COURT: Overruled.
19
20
             THE WITNESS: Starting at Highway 27 did you
21
    say? At Highway 27, there's a culvert under the road.
22
   There's double culverts that go under what used to be
23
   the rail spur for the mine site. There's a small old
24
   rusted-out culvert here that I believe was called the
25
    farm road culvert during a visit and apparently was
                     JOHN COLEMAN - DIRECT
```

associated with an earlier farm, and there's a culvert 1 2 under Copper Park Lane here. 3 BY MS. MCGILLIVAY: Are your markings of those culverts on Figure 2 4 5 based on your observation of those features during your 6 site visits to the Flambeau Mine? 7 Α Yes. 8 Starting with the culvert that you identified at 9 Highway 27 and -- at Highway 27, can you describe what 10 features are between that culvert and the culvert at the railroad corridor? 11 This culvert at Highway 27, I believe, is a 12 13 concrete culvert. It discharges into a small open pool 14 at that corner between Highway 27 and the rail spur. That water then flows along a channel parallel with the 15 16 rail spur. I believe that area was probably modified during mine construction, but then passes the water --17 18 then passes through the culverts under the rail spur where it exits on the south. 19 20 Okay. And so on the south side of the culvert under the railroad spur, could you mark what you're 21 22 referring to? This area water exits right here from those 23 24 culverts.

And then continue on, please, where -- and describe

JOHN COLEMAN - DIRECT

```
the area between that south end of the culvert at the
 1
 2
   railroad spur to the farm road culvert.
 3
   Α
        Well --
             MR. VAN CAMP: Objection. Foundation.
 5
             THE COURT: Sustained.
   BY MS. MCGILLIVAY:
 6
 7
        Have you observed the area, the portion of the
   Industrial Outlot that lies between the culvert at the
 8
   railroad corridor and the farm road culvert?
 9
10
        Yes, I have.
        Based on your observation, can you describe the
11
   features in that area?
12
       We're talking about this area between these
13
14
   culverts here (indicating) and down to the farm culvert,
   and in that area the --
15
16
             THE COURT: I'm sorry, Dr. Coleman. I'm not
   sure which culvert you're talking about at this point.
17
   BY MS. MCGILLIVAY:
18
        Would you mark the culverts with maybe an "X," the
19
20
   railroad corridor?
21
             THE COURT: You could change the color. That
22
   might be good.
23
        There. Pink?
24
   Α
        Fuchsia.
25
        Fuchsia.
                   JOHN COLEMAN - DIRECT
```

A I think the question you're asking me is about the culverts, they exit — I'm going to put an "X" right there. Right at that point the culverts exit. And then the other culvert that you're talking about is down here, the old farm road culvert, and you're talking about the section in here. (Indicating) That is the section that is generally a grassy area. The stream has

THE COURT: You're talking about the lower of the two X's that you put up? Is that what you're --

THE WITNESS: I'm talking about this entire area between the culverts under the rail spur and the culvert under the old farm road. So this area where the stream runs parallel to the biofilter.

THE COURT: I'm sorry, that's not going to work for the record. So if you're talking about the "X" at the top that you marked in, and I'm looking now at the -- if you assume that we're looking north, it would be at the northwest -- closest to the west -- the northwest corner. And then you come down and you put another "X" farther south. Is that the area you're talking about?

THE WITNESS: I'm not sure -- I'm not sure about your question. Northwest corner -- why don't we start over.

MS. MCGILLIVAY: Why don't I start with a clear JOHN COLEMAN - DIRECT

screen.

THE COURT: Let's clear the screen. That's a very good idea.

BY MS. MCGILLIVAY:

- Q I'll ask you if you can identify -- and I think that you have a color change option on yours. Whatever color comes up, it's clear now. Can you identify where the south end of the railroad spur culvert is?
- A Okay. Right here. (Indicating)
- Q And where the culvert is at the old farm access road?
  - A (Witness indicates)
  - Q And can you describe the features between those two points?
  - A In this area between these two culverts the -- it's a grassy area. There's a gentle, relatively gentle swale that the stream passes along. It's not extremely channelized in that area, but there's a swale that the water flows along, a channel, and that area is maybe 100 feet long, not terribly extensive. I'm not exactly sure, a grassy swale where the stream passes.
  - Q Okay. And have you personally observed water flowing between those two points that you've just indicated as the south end of the railroad corridor culvert and the farm access road culvert?

    JOHN COLEMAN DIRECT

```
MR. VAN CAMP: Objection. Leading.
 2
             THE COURT: Overruled.
 3
             THE WITNESS: I have observed water flowing in
   the stream in that area, yes.
 4
 5
   BY MS. MCGILLIVAY:
 6
        To continue down along this waterway, starting at
 7
   the farm access road culvert, can you identify where the
 8
   culvert is at Copper Park Lane?
 9
        That culvert is -- passes under Copper Park Lane in
10
   that area there. (Indicating)
        And have you observed that area between the culvert
11
12
   at the farm access road and Copper Park Lane in your --
       Yes, I have.
13
   Α
14
         Can you describe that section between the farm
   access road culvert and the Copper Park Lane culvert?
15
16
        On the stream channel, there's a stream channel
   there that's somewhat incised into the ground. There is
17
18
   -- it's also grassy in that area, but that stream
   channel has some bare rock and soil in that location.
19
20
   It's more incised, the stream is more incised in that
   section than it is farther about the farm culvert.
21
22
        And have you personally observed water flowing
23
   between those two culverts?
24
        Yes, I have.
   Α
25
        Okay.
                    JOHN COLEMAN - DIRECT
```

1-A-53

```
THE COURT: The lower two you're talking about.
 2
             MS. MCGILLIVAY: The lower two. Thank you.
 3
             THE WITNESS: Yes.
 4
   BY MS. MCGILLIVAY:
 5
        Have you personally observed each of the four
 6
    culverts themselves?
 7
        The four being -- there are actually five;
 8
    including Highway 27, would be five. I think they're
 9
   double culverts underneath the railroad spur. So yes, I
10
   have.
        Thank you for that clarification. So what I wanted
11
12
   to ask you was whether you have observed each of the
13
   culverts: At Highway 27, at the railroad corridor, at
   the farm road, and at Copper Park Lane?
14
        Yes, I have.
15
   Α
16
        And have you on occasion taken photos of the
17
   culverts?
        Of some of those culverts. I have many photos of
18
19
   the culvert under Copper Park Lane. I have -- yeah, the
20
   culverts I probably have photos of, too, but...
21
         I'm going to direct you to your screen and show you
22
   what's been marked as Exhibit 11.
23
         Yes.
24
         Is this a photograph that you took?
    Q
25
         Yes. This is a photograph of the culvert going
    Α
                    JOHN COLEMAN - DIRECT
```

under Copper Park Lane. This is from the north side.

- Q Okay. And why did you take this photograph?
- A I was struck by the amount of corrosion on the bottom of the culvert.
- Q What did you find that was interesting about corrosion of the culvert?

MR. VAN CAMP: Objection. Foundation.

THE COURT: Sustained.

## BY MS. MCGILLIVAY:

- Q What do you -- Dr. Coleman, what do you mean by corrosion at this culvert?
- A I noticed that there was a lot of rust on the bottom of this culvert, and in fact, there's in this photo, you can see a little fountain of water coming up through one of the holes in the bottom of the culvert; that the culvert is rusted through on the bottom and the water from the stream appears to be getting underneath the culvert and then coming back up through the hole in the culvert.

I didn't think it was a big deal, but it looked a little curious to me that it had rusted through. I started wondering about the life of culverts, how long culverts last. I take photos of a lot of things and this struck me as a little more rusted than some culverts I had seen.

JOHN COLEMAN - DIRECT

In looking at this photograph, it appears as though 1 2 those markings continue up above the water line. 3 MR. VAN CAMP: Objection. Leading. THE COURT: Sustained. 5 BY MS. MCGILLIVAY: 6 Dr. Coleman, can you describe what the portion of 7 the culvert -- the culvert above the water line? 8 Well, I'll try to describe what I see in this 9 photograph. There's the water flowing through the 10 culvert, about two inches of water possibly. Further up on the side of the culvert it's moist. It appeared to 11 12 me that the water had, not too long previously, had been 13 a little bit higher. That's stained with a lot of rust. 14 So it looked to me like there was -- that was kind of a level -- I'll mark it here -- a level where the water 15 16 may come up to on a fairly regular basis. And then 17 there's a higher water line that looked like a less frequent water level in that culvert. 18 19 MR. VAN CAMP: I'm going to move to strike. 20 This witness hasn't been qualified as an expert in this area. 21 22 THE COURT: But he can certainly talk about what he saw. The objection is overruled. 23 BY MS. MCGILLIVAY: 24 25 Dr. Coleman, in your review of the other set -- the JOHN COLEMAN - DIRECT

other four culverts in the section of the Industrial
Outlot that you identified in Exhibit 1024, did you
witness any similar water markings on those culverts?

A There were water markings on those culverts. I
would not articulate them as similar because I observed

them much less often. I did notice the farm road culvert was a much older culvert. That culvert, when I saw it, I think that was in 2007, was pretty much rusted all the way through the bottom half of it. But it was an older culvert, so I wasn't particularly surprised.

The other culverts had water staining on them. The amount and extent of staining I wouldn't want to make any statement about.

- Q Okay. I'm going to show you -- go back to Exhibit 1024. Can you describe the biofilter basin?
- A Biofilter basin. It looks like a square pond with cattails coming out of it.
- Q All right. And are you familiar with the biofilter outlet?
- 20 A Yes, I am.

- 21 Q Can you describe the biofilter outlet?
- 22 A The biofilter outlet is maybe 15 feet across along
  23 the berm and extends from the biofilter to where it
  24 reaches the level of -- approximately the level of
- 25 Stream C. That's maybe a 40 or 50 foot distance; sort JOHN COLEMAN DIRECT

```
of a broad rocky swale cut in the berm of the biofilter
 1
 2
   for water to overflow out of the water filter. It's a
 3
   pretty standard type of overflow outlet for some sort of
 4
   a retention basin like this.
 5
        In fact, on Exhibit 1024 can you indicate by where
 6
   the berm is that you just described or the outlet
 7
   rather?
 8
        Well, the berm is this around the biofilter, and
 9
   the outlet of the biofilter is in that area there.
10
    (Indicating)
         Okay. And have you observed that area?
11
        Yes, I have.
12
   Α
13
        And is the biofilter outlet on the northeast corner
14
   of the biofilter basin?
        Yes.
15
   Α
16
             MR. VAN CAMP: Objection. Leading.
   BY MS. MCGILLIVAY:
17
        Can you describe where, in relation to the
18
   biofilter, the outlet is?
19
20
        The outlet is at the northeast corner of the
21
   biofilter. It forms a low portion of the berm. It's
22
   been lined with riprap or rocks to prevent erosion, I
23
   assume.
24
        Looking at Exhibit 1024, do you see that there are
25
   blue arrows on that figure?
                    JOHN COLEMAN - DIRECT
```

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```
Yes.
 1
   Α
 2
         Starting with the blue arrow that is alongside the
 3
   railroad corridor culvert --
 4
        Yes.
 5
        -- does that accurately represent the flow
 6
   direction of water as you observed it?
             MR. VAN CAMP: Objection, Your Honor. Leading.
             THE COURT: Sustained.
 8
 9
   BY MS. MCGILLIVAY:
10
   Q Can you describe the direction of flow of water as
   you observed it at the location of the railroad
11
   corridor?
12
13
            MR. VAN CAMP: Objection. Foundation.
             THE COURT: Sustained.
14
   BY MS. MCGILLIVAY:
       You observed water flowing at the railroad
16
   corridor?
17
            MR. VAN CAMP: Objection. Leading.
18
             THE COURT: Overruled.
19
20
             THE WITNESS: I observed water flowing at all
   these culverts.
21
22
   BY MS. MCGILLIVAY:
23
       And what direction was that flow, since you
   observed it at all the culverts, if you could indicate
24
25
   it by drawing a line.
                    JOHN COLEMAN - DIRECT
```

Okay. At the Highway 27 culvert, the flow was east Α to west. At the railroad spur culverts, it was flowing from the northeast to the southwest. At the farm culvert it was flowing south. And at the Copper Park Lane it was flowing south.

- And in between those culverts, did you also observe flow of water?
- Α Yes, I did.
- And can you indicate on Exhibit 1024 the direction of the flow of the water between the culverts?
- Would you like me to try to draw an arrow? Is that --
- 13 Q. Sure.

1

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- Here the flow between the culverts was in this direction, to the west. In this area here, the flow was 16 to the south. And in this area the flow was to the south, identical to the arrow that's already on the map.
- 18 Those arrows represent better than I can do with my drawing the flow of water. 19
  - Have you observed flow of water from the biofilter to the -- through the outlet of the biofilter?
- 22 Α Yes, I have.
- 23 Have you observed water flowing from the outlet to 24 what you described as Stream C just east of the 25 biofilter?

JOHN COLEMAN - DIRECT

```
MR. VAN CAMP: Object to the form of the
 2
    question.
             THE COURT: Overruled.
 3
             THE WITNESS: Can you repeat the question?
 5
   BY MS. MCGILLIVAY:
 6
        Have you observed the flow of water from the outlet
 7
    into Stream C as you indicated it on 1024?
 8
   Α
        Yes, I have.
 9
        And what is the direction, if you could indicate on
   your screen, the direction of flow of water from the
10
   biofilter basin to Stream C east of where -- just east
11
12
   of the biofilter?
13
        The water flow was flowing from the biofilter to
14
   the east towards Stream C.
        And what distance does -- what is the distance
15
16
   between the biofilter outlet and what you've identified
   as Stream C at that location?
17
18
        In my statement, I said ten feet and I think that
19
    is fairly close to accurate. A lot depends on where you
20
   measure the outlet. I was referring to the lower toe of
   the outlet to Stream C was approximately ten feet.
21
22
        What do you mean by lower toe?
        As the outlet slopes down to reach the level of the
23
24
   surrounding ground, where that slope of the outlet
25
   reaches the level of the surrounding ground I would call
                    JOHN COLEMAN - DIRECT
```

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24

of the map is to the north.

```
the toe. It would be the toe of the berm. So from that
lower slope of the outlet to Stream C I would say it was
approximately ten feet.
     Where you just drew your line, your directional
line from the biofilter basin to Stream C, there is
another blue arrow that had been on the figure. Do you
see that arrow?
    Yes. I can't see where the head of the arrow is on
the screen here. I can see that there's a dark blue
line there at the biofilter outlet, but I can't see
which direction that arrow is pointed.
    I'm trying to touch my own screen which doesn't
work.
    It appears that that arrow is pointing to the east
and that is the direction that I saw water flowing.
         THE COURT: So which direction -- I thought
this was pointing north. Is the top of the screen north
or south?
    Dr. Coleman, do you know the direction -- and I can
refer you to -- back to Joint Exhibit 1016, which I
believe has a directional notation on it.
    Yes. Is there a question?
Α
     The Judge asked a question --
     Oh. I thought of you. North on the map -- the top
Α
```

JOHN COLEMAN - DIRECT

```
THE COURT: Okay. And then I'm confused. You
 2
   had an arrow and you said it was pointing to the east,
   and it looked to me like it was pointing to the west if
 3
 4
   the top of the map was north.
 5
             THE WITNESS: Okay. I think -- an arrow that I
 6
    drew?
 7
             THE COURT: Well, there's a squiggly arrow.
 8
    The highest blue thing on the screen. And --
 9
             THE WITNESS: Yes. That is water flowing on
10
   the north side of the rail spur. Water flows to the
    west --
11
12
             THE COURT: Now to the west. Okay.
             THE WITNESS: -- in Stream C. So all my arrows
13
14
   -- is there a way for me to erase a particular line?
   BY MS. MCGILLIVAY:
15
16
       I think you can hit clear last on the upper
17
   right-hand corner.
            MR. VAN CAMP: Your Honor, I don't think
18
19
    there's a question pending.
20
             THE COURT: You may ask one.
             THE WITNESS: The arrow I --
21
22
             THE COURT: Wait, Dr. Coleman. Ms. McGillivay
23
   has to ask you another question.
24
   BY MS. MCGILLIVAY:
25
         Can you clarify the flow direction at the railroad
                    JOHN COLEMAN - DIRECT
```

1-A-63

```
spur?
 1
 2
             MR. VAN CAMP: Object to the form of the
 3
    question.
             THE COURT: Sustained.
 5
   BY MS. MCGILLIVAY:
 6
         Do you know what the flow direction is or the water
 7
    flow is at the north part of the railroad spur?
 8
         On the north side of the railroad spur water flows
 9
   from east to west --
10
   Q
         Okay.
         -- in Stream C.
11
12
         Okay. And can you describe then the water flow
13
   throughout the rest of this section as it travels down
14
   to Copper Park Lane?
             MR. VAN CAMP: Objection. Asked and answered.
15
16
             THE COURT: I think you've covered it. I was
   -- I think that the witness said the arrow was pointing
17
   east and I think that's where we got into all that
18
19
   discussion. But you've clarified that the arrow was
20
   pointing west.
21
   BY MS. MCGILLIVAY:
22
         Have you -- pull your attention back to the monitor
23
   and Exhibit 74. Do you recognize this photograph?
24
   Α
         Yes, I do.
25
         Did you take this photograph?
                     JOHN COLEMAN - DIRECT
```

```
Yes, I did.
 1
   Α
 2
         What is it a photograph of?
 3
         That's the biofilter basin, with the berm of the
 4
   basin in the foreground.
 5
         What date was this photograph taken?
   Q
 6
         That was in 2004.
   Α
 7
         Okay. Looking at the lower right-hand corner --
 8
   Α
        Yes.
 9
         -- is that the correct date?
    Q
10
        That is the correct date.
   Α
        June 3rd, 2004?
11
    Q
12
   Α
        Yes.
         Okay. You just -- you said you could -- the berm
13
14
   of the biofilter was visible in this picture. Can you
    indicate what you're referring to on the figure?
15
16
        In the foreground here the soil is somewhat built
17
        This is, I believe, a corner of the biofilter, so
   there's a berm where I've drawn this blue line and then
18
   the berm continues to the right. And off to the right
19
20
   here, off to the right-hand side of the photograph is
21
   where the outlet would be or is.
22
         Show you what's been marked as Exhibit 76. Do you
23
   recognize this photograph?
24
        Yes, I do.
   Α
25
         Did you take it?
                     JOHN COLEMAN - DIRECT
```

1-A-65

```
Yes, I did.
 1
   Α
 2
         Did you -- what date did you take it?
 3
         June 3rd, 2004.
    Α
 4
             THE COURT: I'm sorry, Ms. McGillivay. My
 5
   exhibit list stopped at 73.
 6
             MS. MCGILLIVAY: Your Honor, that was one of
 7
    the other issues I meant to raise. The late exhibits --
 8
   we have not yet updated our exhibit list. Would you
 9
    like us to refile --
10
             THE COURT: We'll take a break right now, not
    that you -- but no. I do not want you to refile it, but
11
12
    I would like you to file a piece of paper that starts
13
   with 74 and goes up. But don't -- do not, whatever you
14
    do, reproduce the other pages because then all my notes
    will be -- will have to be transposed.
15
16
             MS. MCGILLIVAY: Okay.
                                    Thank you.
             THE COURT: I don't want to do that. All
17
          We'll take 15 minutes. And for everybody's
18
   right.
19
   planning, we'll break for lunch at 12:30.
20
         (Recess
                                  10:45-11:00 a.m.)
21
             THE COURT: You may proceed.
22
             MS. MCGILLIVAY:
                             Thank you, Your Honor.
23
   reminded during the break I forgot to move into evidence
24
   Exhibit No. 11 and I move that into evidence.
25
             THE COURT:
                        Any objection?
                     JOHN COLEMAN - DIRECT
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1-A-66

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MR. VAN CAMP: No objection.
             THE COURT: Received.
             MS. MCGILLIVAY: And similarly Exhibit 1002.
 3
 4
    show those --
 5
             THE COURT: Those are the joint exhibits,
 6
    aren't they?
             MS. MCGILLIVAY: Correct.
             THE COURT: I'm assuming they're all received.
 9
            MR. VAN CAMP: We reserved objection to some of
10
    them on the basis of who the witness was and whether
    they had foundation and so forth.
11
12
             THE COURT: Oh, okay.
13
             MR. VAN CAMP: But I don't have an objection to
14
    introduction of the joint exhibits that have been
    discussed so far.
15
16
             THE COURT:
                        Okay. And that would be 1002.
            MS. MCGILLIVAY: 1016. 1015 and 1024.
17
18
             THE COURT: All right.
19
             MS. MCGILLIVAY: Thank you, Your Honor.
20
             THE COURT: They're all received.
   BY MS. MCGILLIVAY:
21
22
        Dr. Coleman, I have Exhibit 1024 back up on the
23
    screen and I want to make sure that I heard you
24
   correctly. Can you please tell me the direction of flow
25
    from the biofilter to Stream C at that point in which
                    JOHN COLEMAN - DIRECT
```

Stream C is adjacent to the biofilter? 1 2 MR. VAN CAMP: Objection, Your Honor, to 3 reference of a stream in an area where the witness has 4 clearly testified that it's a grassy swale. 5 THE COURT: Sustained. BY MS. MCGILLIVAY: 6 7 Dr. Coleman, can you describe the direction of flow 8 from the biofilter basin to the waterway that is adjacent to the biofilter? 9 10 MR. VAN CAMP: Your Honor, I'm going to object once again to the form of the question. The witness 11 12 hasn't testify there's a waterway adjacent to the biofilter. 13 14 THE COURT: Perhaps you can just ask it in a 15 more neutral way. 16 BY MS. MCGILLIVAY: Dr. Coleman, can you describe the direction of flow 17 from the biofilter basin? 18 The water flow from the biofilter here is going 19 20 from west to east to Stream C through the outlet. 21 You just used the term Stream C. Can you describe 22 what you mean by that term? I mean the water flowing -- continuation of the 23 24 stream that passes under the rail spur, exits those

culverts, flows along in a channel parallel with the JOHN COLEMAN - DIRECT

berm of the biofilter that passes under the farm road 1 2 culvert. Does Stream C, as you just described it, stop at 3 4 the farm road culvert? 5 MR. VAN CAMP: Objection. Leading. THE COURT: Sustained. 6 7 BY MS. MCGILLIVAY: 8 Can you describe Stream C as you understand that term downgradient of the biofilter basin? 9 10 Stream C passes to the east of the biofilter down underneath the farm culvert here in this area and then 11 12 farther south and it passes underneath Copper Park Lane here in a culvert. 13 14 When you use the term Stream C, can you describe what area on Exhibit 1024 you're referring to? 16 When I use the term Stream C, I -- this whole area 17 starting at the southwest of the photograph here up 18 under Copper Park Lane. I'm traveling upstream here up under the farm culvert, past the biofilter outlet and 19 20 underneath the culverts under the rail spur, then along 21 the north side of the rail spur to where the culvert at 22 Highway 27 is. That is the area I would describe as 23 Stream C. 24 What is the direction of flow of water in Stream C 25 as you defined it?

JOHN COLEMAN - DIRECT

A Exactly opposite from the path of my finger. So it is from the northeast to the southwest generally across the site.

- Q Show you Exhibit 76. I think when we went on break we were discussing that. Do you recognize Exhibit 76?
- A Yes. This is a picture I took.
- Q Now you may have identified this already so I apologize for being redundant, but what was the date the photograph was taken?
- 10 A June 3rd, 2004.

- 11 Q And what is it a picture of?
  - A This is the lower portion of the outlet of the biofilter. You can see some of the rock riprap that was in the biofilter outlet. This is the outlet, probably the -- this here I'm marking is actually the berm of the biofilter. Right here is a portion of the biofilter outlet. This is -- the water is flowing in this picture from the lower left to the center of the photo in this direction, and so there's water moving out of the biofilter across the biofilter outlet to Stream C which passes through this grassy area here.
  - Q Let me show you another photograph that's been marked as Exhibit 80. Do you recognize that photograph?
  - A Can I clear the --
- Q Oh, yes. Thank you.

  JOHN COLEMAN DIRECT

This is another picture that I took on June Α Yes. 3rd, 2004 of the same area. In fact, a very similar I think this same rock shows up in both pictures. Again, water coming out of the biofilter off to the left side of the photograph, passing through the outlet, and exiting to the east.

- Where in relation to this photograph is the biofilter outlet?
- This picture is the biofilter outlet. Α

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14

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19

22

- 10 And the flow direction is in -- can you indicate the flow direction? 11
  - The flow direction is from the bottom left side of the photo here and flows to the center of the photo or the top right of the photo.
- What was your vantage point when you took this 15 16 photograph?
  - I was standing on some of these rocks in the biofilter. There was water, so I was trying to keep my feet dry.
- 20 I'm going to show you what's been marked as Exhibit
- 21 Do you recognize this photograph? 81.
- This is also a photograph I took on June 3rd, Yes. 2004, from the same location as the previous two. 23
  - Can you describe what this photograph represents? Q
- 25 On the top left-hand area is standing water in the JOHN COLEMAN - DIRECT

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biofilter. This is the entrance to the biofilter. You
can see some of the rock riprap that's in the biofilter,
and the water is moving from the biofilter through the
outlet and passing from the top left of the photo to the
bottom right of the photo.
    And that photograph was taken on what date?
    June 3rd, 2004.
         MS. MCGILLIVAY: I'm going to move Exhibits 76,
80 and 81, those three photographs, into evidence.
         THE COURT: Any objection?
         MR. VAN CAMP: No objections.
         THE COURT: Received.
BY MS. MCGILLIVAY:
     Turn your attention back to 1024. Can you indicate
on this figure the area that you just described in
Exhibits 76, 80 and 81, the three photographs?
     The area -- those three photographs represent the
outlet to the biofilter that I circled in the photo.
    And they were taken -- on the day they were taken,
June 3rd, 2004, did you observe flow of water from the
biofilter to Stream C?
Α
    Yes, I did.
         MR. VAN CAMP: Objection. Leading.
         THE COURT: Overruled.
BY MS. MCGILLIVAY:
                JOHN COLEMAN - DIRECT
```

```
I'm going to show you what's been marked as Exhibit
 1
    Q
 2
    82.
         Do you recognize this photograph?
 3
         Yes, I do.
    Α
 4
         What is this a photograph of?
 5
         This is a photo I took on June 3rd, the same day.
 6
    It is Stream C immediately below Copper Park Lane.
 7
    There is -- and it's part of the construction of Copper
 8
   Park Lane. There was a lot of riprap placed in Stream C
 9
    immediately adjacent to the road. So I'm standing
10
   approximately on the top of a culvert under Copper Park
    Lane; the water is flowing in this direction, and then
11
12
   it enters the natural channel here and flows into the
13
   woods. So the flow direction is as I've indicated on
14
   the photograph.
         Looking back to Figure 1024, can you indicate on
15
16
   that figure where that photograph was taken, the
   photograph which is Exhibit 82.
17
18
         It was taken right here looking in this direction,
19
    (indicating) looking to the southwest from Copper Park
20
   Lane.
21
         And that was also on June 3rd, 2004?
22
   Α
         Yes, it was.
23
         On Exhibit 24 then, on June 4th -- excuse me, June
24
    3rd, 2004, can you indicate a complete line where you
25
    observed flow of water on that date?
                     JOHN COLEMAN - DIRECT
```

```
I observed --
 1
   Α
 2
             MR. VAN CAMP: Your Honor, I'm going to object.
 3
    I think the reference was to Exhibit 24 and for purposes
 4
   of clarifying the record --
 5
             THE COURT: It's 1024.
            MR. VAN CAMP: 1024. Thank you.
 6
             THE WITNESS: I observed water passing out of
 8
    this culvert here at Highway 27. I observed water
 9
   passing out of here and into this channel. On that day
10
   I observed water flowing here and flowing in Stream C
   along this section, and then I observed water flowing in
11
12
    Stream C here and on the southern end of Copper Park
13
   Lane.
   BY MS. MCGILLIVAY:
14
15
        In between the -- did you observe any dry areas in
16
    Stream C on the figure indicated in Exhibit 1024 on June
    3rd, 2004?
17
       I did not.
18
   A
19
             MS. MCGILLIVAY: Your Honor, I move Exhibit 82
20
   into the record.
21
             MR. VAN CAMP: No objection.
             THE COURT: Received.
22
23
   BY MS. MCGILLIVAY:
24
        Dr. Coleman, I'm going to direct your attention
25
    back to the screen. Exhibit 12 should be showing. Do
                    JOHN COLEMAN - DIRECT
```

you recognize this photograph? 1 2 Yes. This is a photograph I also took in 2004 in 3 April. On the lower right-hand corner of the photograph it 4 5 says 4-19-2004. Is that a correct date? 6 Α That is. 7 And what is this a photograph of? This is -- I'm standing on the edge of Copper Park 8 9 Lane looking north. You can see the upper lip of the 10 culvert that goes underneath Copper Park Lane. Stream C is flowing towards me from the north. In the background 11 12 you can see the reclamation effort for the rail spur had been completed. There's still some erosion control 13 fabric along the rail spur, and you can see Stream C 14 coming down here through the photograph -- passing under 15 16 the --17 Do it again. Stream C coming down through the photograph, 18 passing under the farm road culvert right here -- you 19 20 can see the mouth of that culvert -- and entering the culvert under Copper Park Lane. 21 22 On the upper left of the photo is the berm of the biofilter in this area right here. (Indicating) 23 24 In relation to this photograph where would the 25 biofilter outlet be?

JOHN COLEMAN - DIRECT

```
The biofilter outlet is right in this area here,
 1
   Α
 2
   obscured by tall dead grass. (Indicating)
            MS. MCGILLIVAY: I'm going to move Exhibit 12
 3
 4
    into the record.
 5
            MR. VAN CAMP: No objection.
             THE COURT: Received.
 6
 7
   BY MS. MCGILLIVAY:
 8
        I'm going to show you what's been marked as Exhibit
 9
   15, which it should be on your screen. Do you recognize
10
   this document?
        Yes. This is a photograph I took that same day,
11
   April 19th, 2004.
12
   Q And what is this a photograph of?
13
       It's a photograph of my daughter. Setting her
14
15
   aside, it is the biofilter in the background and you can
16
   see in the very back is one of the inlets to the
   biofilter, riprap area. But the biofilter, pond, the
17
   water and Stream C flowing down into the culvert under
18
   Copper Park Lane. In this area right here where the
19
20
   tall vegetation is is where the biofilter outlet is.
21
        Was this photograph taken at approximately the same
22
   time as Exhibit 12?
23
       Yes.
24
            MS. MCGILLIVAY: Move Exhibit 15 into the
25
   record.
                    JOHN COLEMAN - DIRECT
```

```
MR. VAN CAMP: No objection.
 2
             THE COURT: Received.
 3
   BY MS. MCGILLIVAY:
 4
         Turning back now to Exhibit 1024, can you indicate
 5
    on Exhibit 1024 the area that was depicted in Exhibits
    12 and 15?
 6
 7
             MR. VAN CAMP: Object to the form of the
 8
   question. I believe he has already answered as well.
 9
             THE COURT: I don't think he needs to answer
10
   this.
   BY MS. MCGILLIVAY:
11
        On April 19th, 2004, did you observe water flowing
12
13
    in Stream C?
14
         April -- I'm sorry. These dates are --
15
         I can refer you back to Exhibit 15.
16
        On this date I do not believe I went actually right
   up to the outlet of the biofilter.
17
        On the date that Exhibits 12 and 15 were taken, can
18
   you indicate on Exhibit 1024 where you observed water
19
20
   flowing?
21
         I observed water flowing from roughly a little bit
22
   south of the culverts exiting the rail spur area down
23
   through -- so underneath the farm road culvert and then
24
   down into the culvert under Copper Park Lane. And then
25
    I also observed water flowing out of that culvert down
                    JOHN COLEMAN - DIRECT
```

```
towards the Flambeau River.
 1
 2
         Do you recognize Exhibit 16, which appears on your
 3
   screen?
 4
    Α
         Yes.
 5
        Did you take that photograph?
   Q
 6
         Yes. I took that photograph April 19th, 2004.
   Α
 7
        And was this during the same visit or approximately
 8
   the same time that the photographs taken that are
   Exhibit 12 and 15 were taken?
 9
10
        Yes, it is.
   Α
         And can you describe what is depicted in Exhibit
11
   16?
12
13
         This is looking northeast towards Copper Park Lane.
   Copper Park Lane is along the top of this grassy area.
14
15
   I'm standing in the natural channel of Stream C and
16
   looking up towards the culvert underneath Copper Park
   Lane. The culvert is right in this area here.
17
    (Indicating) The water is flowing towards me from the
18
   north or northeast.
19
20
             MS. MCGILLIVAY: I move Exhibit 16 into
21
   evidence.
22
             MR. VAN CAMP: No objection.
23
             THE COURT: Received.
24
25
   BY MS. MCGILLIVAY:
                     JOHN COLEMAN - DIRECT
```

```
Have you observed Stream C where it intersects with
 1
 2
   the Flambeau River?
 3
        Yes, I have.
   Α
 4
        And have you observed water flowing in Intermittent
 5
   Stream C to the Flambeau River?
        I've observed water flowing exiting Stream C into
 6
 7
   the Flambeau River, yes.
 8
        Have you observed water in Stream C -- flowing
   water north of Copper Park Lane in Stream C flowing
 9
10
   under Copper Park Lane to the Flambeau River?
             MR. VAN CAMP: Objection. Object to the form
11
12
   of the question. Objection. Leading.
13
             THE COURT: Sustained.
   BY MS. MCGILLIVAY:
14
        Looking at Exhibit 1016, can you indicate where you
15
16
   have in the past seen flow of water along Stream C?
17
             MR. VAN CAMP: Object to the form of the
18
   question.
             THE COURT: Overruled.
19
20
             THE WITNESS: Can you repeat the question?
   BY MS. MCGILLIVAY:
21
22
        Can you indicate on Exhibit 1016 the -- based on
   your past observations, the extent of flow that you
23
24
   observed in Intermittent Stream C?
25
        Can you zoom in a little bit? It's hard to draw on
   Α
                    JOHN COLEMAN - DIRECT
```

```
something that small.
 1
 2
         Sure.
 3
        I observed water in Stream C from Highway 27 along
 4
   its entire length to this point.
 5
             THE COURT: When you say this point, what are
6
   you --
 7
             THE WITNESS: This point south of Copper Park
8
   Lane.
9
             THE COURT: Oh.
10
             THE WITNESS: On many occasions. And then on
   two occasions walked the length of Stream C and saw
11
12
   water in that streambed. And on one occasion there were
   occasional sandy areas where the stream had soaked into
13
14
   the sand on one occasion.
15
        On another occasion there was what appeared to be
16
   continuous surface water connection down to the outlet
   at the Flambeau River.
17
   BY MS. MCGILLIVAY:
18
19
        Have you observed continuous surface water
20
   connection from Stream C at Highway 27 to the Flambeau
   River?
21
22
        I believe I have.
23
             MS. MCGILLIVAY: No further questions.
24
             THE COURT: Mr. Van Camp.
25
            MR. VAN CAMP: Thank you very much. I do not
                    JOHN COLEMAN - DIRECT
```

have copies of the recently identified exhibits. 1 2 MS. MCGILLIVAY: Yes, you do. I gave them to 3 you this morning. 4 MR. VAN CAMP: Okay. Oh, okay. Well then I 5 think I'll have to use the ELMO. Judge, it might be 6 easier if counsel would agree to pull up the photographs 7 electronically since I didn't get electronic copies of 8 them before today. So if they're willing to do that, I 9 think that might be easier for everybody. 10 MS. MCGILLIVAY: Yes. MR. VAN CAMP: Okay. 11 12 CROSS-EXAMINATION 13 BY MR. VAN CAMP: 14 Dr. Coleman, it's my understanding that you visited the mine site eleven times; correct? 15 16 Α Yes. When were those visits? 17 18 You want the dates for every visit? I can read from my statement, otherwise I'm not going to be able to 19 20 tell you the exact dates for those eleven visits. 21 Okay. Well, feel free to take a look at your 22 declaration. I believe you set them out in paragraph 8. 23 Yes. 24 You had four visits in 2004; correct? Q 25 Α That is correct.

```
And those four visits were more than five years
 1
 2
   before this lawsuit was filed; correct?
 3
         Yes.
   Α
 4
         You visited in 2004 on April 18th, April 19th, June
 5
    3rd, and August 18th; correct?
 6
   Α
         Yes.
 7
         When you visited on those dates, I believe you saw
 8
   the -- you looked at the biofilter outlet closely.
         On some of the dates that I visited, I did look at
 9
   Α
10
   the biofilter closely, yes.
         Which of those dates?
11
12
         Okay. I think in a further paragraph, I can give
13
   you those dates if we --
14
         Look at paragraph 14, page 5.
         Yes. Well, April 19, June 3rd, August 18th, and
15
16
   the fourth occasion would be -- in 2007 during the COC
   hearing, that would have been, I think, April 17th,
17
   2007.
18
19
         When you say that you observed the biofilter outlet
20
    closely, what do you mean by that?
21
         I was with -- close enough to see the biofilter to
22
    see if there was water flowing in the biofilter.
23
         What do you mean by water flowing in the biofilter?
24
         Some water moving in the biofilter.
   Α
25
         Okay. You said the biofilter looks like --
                     JOHN COLEMAN - CROSS
```

```
Not biofilter, I mean biofilter outlet. So I was
 1
   Α
 2
   close enough to see if there was water in the outlet.
 3
         Okay. How many occasions were you close enough to
 4
   the biofilter outlet to see whether water was coming out
 5
   of it?
 6
   Α
         On four occasions.
 7
         Would you take a look at paragraph 15 on page 5 of
 8
   your declaration.
 9
         Um-hmm.
   Α
10
         You say that "on three of the four occasions, I
   observed the biofilter's outlet. I saw water
11
12
   discharging from the biofilter."
13
   Α
         Yes.
14
         Is that an accurate statement?
         I believe it is.
15
   Α
16
         So which three occasions is that referring to?
         That would be April 19th, I think -- April 19th,
17
   June 3rd, and August 18th.
18
         All in 2004.
19
20
    Α
         Yes.
21
         Did you see water flowing out of the biofilter when
22
   you were closely observing the biofilter at any other
23
   time?
24
        One other time during the COC field trip I may or I
25
   may not have. I cannot definitely say whether there was
                     JOHN COLEMAN - CROSS
```

```
water exiting through the outlet at that time or not.
 1
 2
         Well, if there was, you didn't put it in your
 3
   declaration, did you?
 4
         I did not because I could not definitely determine
 5
   that.
 6
         On any of the three occasions: April 19th, 2004;
 7
    June 3rd, 2004; August 18th, 2004, was anybody else with
 8
   you?
 9
        Let's see, I'm trying to remember when these -- I
10
   believe on August 18th, 2004, was when the DNR and
   Flambeau Mining Company had a field trip to look at
11
12
   Stream C.
13
         Any other occasion in 2004 when anybody else was
14
   with you?
         Well, my daughter was with me in the photograph
15
16
   that's on the screen.
         I'm sorry, I was asking you about times when you
17
18
   were observing the biofilter outlet closely.
         I believe April 19th, 2004, was one of those times.
19
20
         And who was with you?
21
         My daughter.
   Α
22
         Okay. Are you aware of any tests of the water
23
   coming out of the biofilter on the occasions that you
24
   claim it was coming out on April 19th, 2004; June 3rd,
25
    2004; or April 18th, 2004 -- August.
                                           Sorry --
                     JOHN COLEMAN - CROSS
```

```
MS. MCGILLIVAY: Objection.
 2
             MR. VAN CAMP: -- August 18, 2004.
             MS. MCGILLIVAY: Outside the scope of cross.
             THE COURT: Overruled.
 5
             THE WITNESS: Can you repeat the question?
 6
   BY MR. VAN CAMP:
 7
        Are you aware of any tests of the water that came
 8
    out -- that you claim came out of the biofilter outlet
 9
   on April 19th, 2004; June 3rd, 2004; and August 18th,
10
    2004?
        Off the top of my head, I believe that there was a
11
    sample taken on April 19th, 2004, but my recollection of
12
   that is fairly sketchy.
13
14
        You would agree, would you not, that standing on
15
   Copper Park Lane you cannot see whether or not water is
16
   coming out of the biofilter outlet?
         I would say in these photographs you cannot.
17
   think when the water is high enough, it can be seen from
18
   Copper Park Lane, I believe.
19
20
         How far away is Copper Park Lane from the biofilter
   outlet?
21
22
   Α
         Seventy-five/one hundred feet.
23
         Seventy-five or a hundred feet?
24
         Maybe a hundred feet, yeah.
   Α
25
         Well, other than the four occasions when you
                     JOHN COLEMAN - CROSS
```

1

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Yes.

closely observed the biofilter, which were all in 2004 2 -- I'm sorry, were in 2004 except one in 2007, all of your observations were from Copper Park Lane; correct? That is correct. So at best from that vantage point you would be trying to determine whether water was flowing out of the biofilter outlet from 75 or 100 feet or more; correct? Α On other occasions when I was not at the outlet, that would be the case. But --Mr. Coleman, did you ever measure the amount of flow coming out of the biofilter? No, I did not. Did you ever measure the flow going out of the wetland into the culvert under Copper Park Lane? You're talking about this area, the culvert, the water entering the culvert under Copper Park Lane? Q Right. Α No, I did not. Did you ever measure the flow of water anywhere between what you've called Highway 27 culvert all the way down to Copper Park Lane south of -- I'm sorry, Stream C south of Copper Park Lane? By flow, you mean installation of a flow or using Doppler radar or some such technique to measure flow?

```
No, I did not.
 1
   Α
 2
         Do you know in any of the years that you were out
 3
   there -- you were out there in 2004; correct?
 4
         Correct. Yes.
    Α
 5
         You were not out there in 2005?
    Q
 6
   Α
         Not to my recollection, no.
 7
         You were out there once in 2006; correct?
    Q
 8
   Α
         I believe that to be the case, yes.
 9
         You were out there twice in 2007?
    Q
10
   Α
         Yes.
        You were out there once in 2008?
11
12
   Α
         Yes.
13
         On any of those occasions, were you aware of how
   many days during the years 2004, 2005, 2006, 2007, 2008
14
15
   to present, how many days there was flow in what you
16
   have referred to as Stream C north of Copper Park Lane?
17
         Can you repeat the question?
         Sure. How many days did Copper Park -- I'm sorry.
18
   How many days did Stream C in the area you've identified
19
20
   north of Copper Park Lane flow?
21
         When I was there it flowed every time. When I
22
   wasn't there I wouldn't know.
23
         Okay. So four times in 2004; correct?
24
         Yes.
   Α
25
         No times in 2005?
                     JOHN COLEMAN - CROSS
```

```
Is the question about no times I was there or no
 1
   Α
 2
   times it was flowing?
 3
         Well, do you have any personal observations of any
 4
   flow in 2005?
 5
         I have no observations in 2005 whether it was
 6
   flowing or not flowing.
 7
         Do you have any observations in 2006 whether it was
 8
   flowing or not?
 9
         I have no observations.
   Α
10
        Do you have any observations in 2007 whether it was
   flowing?
11
         Yes, I do.
12
   Α
13
   0
        How many?
14
         Sorry, can you repeat your previous -- I think I
   might have misanswered your previous question.
15
16
         Sure. My question is you have claimed that Stream
   C exists north of Copper Park Lane; correct?
17
        I have observed flow north of Copper Park Lane,
18
19
   yes.
20
        Okay. And in some of the places where you observed
21
   flow, you observed flow over a grassy area; correct?
22
   Α
         Yes.
23
         That was sheetflow; correct?
24
         Can you define sheetflow.
   Α
25
         Have you ever used the term sheetflow?
                     JOHN COLEMAN - CROSS
```

```
Personally probably not, but I'm not sure.
 1
   Α
 2
         Okay. I'm talking about water flowing over a
 3
   grassy area.
 4
         When I observed that water flowing over the grassy
 5
   area, it was in a defined flow; not spread out across a
   broad area. So I would not -- I would not describe that
 6
 7
    as sheetflow. I worked in Florida and they have
 8
    sheetflow across the Everglades, which is broad
 9
    expansive flat areas. Sheetflow requires really flat
10
   topography.
         Next to the biofilter is an area that has a channel
11
12
    that's slightly depressed, and so the water is funneled
13
    into that channeled area. So I would not call that
    sheetflow.
14
15
         All right. Let's talk about the channel. Did you
16
   have any pictures of a channel north of the stub road
17
    Α
         No.
         When you refer to a channel north of the stub road
18
19
    culvert, you're referring to a grassy swale; correct?
20
    Α
         I think it could be called also grassy swale, yes.
21
         I believe you called it a grassy swale.
    Q
22
   Α
         I did, yes.
23
    0
         Okay.
24
             THE COURT: Well, I think he called it a swale.
25
    I'm not sure he called it grassy.
```

```
Okay. It is a swale covered with grass, is it not?
 1
   Q
 2
         I mentioned it has grass in the area and also I
 3
   think I called it a swale, so...
 4
         On how many occasions do you believe that you saw
 5
   flow north of Copper Park Lane in 2007?
 6
        In 2007 how many occasions I saw flow. Well, it's
 7
    listed in my deposition on April 17th and May 17th in
   2007 I saw flow.
 8
 9
        Okay. So twice.
    Q
10
   Α
        Yes.
        How many occasions did you see flow north of Copper
11
   Park Lane in 2008?
12
       One time.
13
   Α
       What about 2009?
14
   Q
15
        I visited the site one time and I saw flow there,
16
   yes.
         That's not in your declaration, is it?
17
         I'm sorry. 2009. Sorry, I thought you were --
18
    sorry. That was a misstatement. You said 2009?
19
20
         That's correct.
21
         I was reading ahead. Sorry. I did not visit the
22
   site in 2009.
        What about 2010?
23
24
        I visited the site one time and I saw flow.
   Α
25
        What about 2011?
                     JOHN COLEMAN - CROSS
```

```
I have not. I was not at the site in 2011.
 1
   Α
 2
         So those are all of the occasions on which you have
 3
    seen flow; correct?
 4
         In paragraph 8 of my statement I listed all the
 5
   occasions where I observed Stream C and on those
    occasions I observed flow.
 6
 7
        So what was the one occasion that you referred to
 8
    in your declaration when you didn't see flow?
 9
    Α
         Can you point me out where I made that statement?
10
         In paragraph 14 of your declaration you refer to
    four occasions. Do you see that?
11
12
   Α
        Yes.
             MS. MCGILLIVAY: Objection. Are you talking
13
14
    about paragraph 15?
             MR. BENDER: 15? No, I'm talking about 14.
15
16
             THE COURT: Do you have an objection?
17
             MS. MCGILLIVAY: Objection. Misstates his
18
   testimony.
19
                         I'm sorry?
             THE COURT:
20
             MS. MCGILLIVAY: Misstates his testimony.
21
             MR. VAN CAMP: I'm referring him to paragraph
22
    14 of his declaration.
23
   BY MR. VAN CAMP:
24
        Refers to four occasions; correct?
25
         Yes. Yes. 14, yeah.
                     JOHN COLEMAN - CROSS
```

Q And then paragraph 15 of your declaration says on three of the four occasions you observed the biofilter outlet; correct?

- A On three of the four occasions, yes.
- Q Were you -- when you say you didn't observe the biofilter outlet, did you see flow in Stream C on that date at any of the locations north of Copper Park Lane?
- A I want to make sure I understand your question. On this date, the one -- there's one of the four occasions when I observed the outlet closely. I did not state that I saw flow and you're asking me if I saw flow in Stream C.
- 13 Q Correct.

- 14 A Yes, I did.
- 15 Q Where?
  - A That would have been in 2007 during the visit, I think it was the May 17th, 2007, visit for the COC hearing, and we went to a number of places at the site and there was flow at Copper Park Lane. Without reviewing photographs, I probably couldn't tell you for sure where else I saw that, but...
  - Q Maybe I'm misunderstanding your declaration, but in paragraph 15 of your declaration you say on three of four occasions. Do you see that?
- 25 A Yes.

```
Okay. Which three of the four occasions are you
 1
 2
   referring to?
         I'm referring to April 19th, 2004; June 3rd, 2004;
 3
   and August 18th, 2004, on occasions where I saw flow at
 4
 5
   the biofilter outlet.
 6
        And what is the fourth occasion you're referring to
 7
    there that apparently you did not?
 8
   Α
         On May 17th, 2007, I don't have definitive
 9
   recollection of whether I saw flow or not --
10
         Okay.
         -- in the outlet of the biofilter.
11
12
         Okay.
13
             MR. VAN CAMP: Could we pull up 1024.
14
    Q
         Do you have the document 1024 before you?
         I do.
15
   Α
16
        And you see the dotted line that is an odd shape to
17
   the right of the biofilter that defines a wetland.
18
   you see that?
        White line? Yes. White dotted line.
19
20
         I thought it was light blue. But at any rate, it
21
   is a dotted line that defines the area of the biofilter.
22
   Do you agree with that?
23
         Sorry. Can you restate your question? I thought
24
   you were asking me about to the right of the biofilter,
25
   but are you talking about the biofilter itself?
                     JOHN COLEMAN - CROSS
```

1

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11

12

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17

18

19

20

21

22

23

24

25

```
Okay. Let me just draw it on here. (Indicating)
I've tried to draw a red circle around an area that
includes a white or very light blue dotted area that is
a field delineated wetland. Do you see that?
     I see that, yes.
Α
     You didn't do a wetland delineation yourself, did
you?
Α
     No, I did not.
     Do you have any reason to disagree with the
delineation of the wetland as it appears on Exhibit JE
1024?
     I don't have a reason to agree or disagree with it.
     When you were in that area, did you agree that you
were walking through a wetland?
     Some of those areas -- I did not walk through all
the area delineated by that boundary. Some of those
areas certainly I would describe as having wetland
plants.
     Now during your testimony you provided us with some
dimensions and one of the dimensions that you provided
us with was the rocky slope coming down from the
biofilter. Do you recall that?
     Yes.
     Can you draw a circle around the place on Exhibit
JE 1024 where you believe that rocky slope is.
                 JOHN COLEMAN - CROSS
```

```
In the northeast corner of the biofilter is where
 1
   Α
 2
   the outlet is and that rocky slope that I described.
        Now you've drawn a pretty good-sized blue circle on
 3
 4
   there. Do you think that -- if you want to look at the
 5
   key in the lower right-hand corner of JE 1024, you'll
   see the dimensions down there. Do you see that?
 6
 7
    Α
        Yes.
 8
        And so the circle that you drew is what, 60 or more
 9
   feet wide?
10
               If you want to zoom in farther, I'll try to
        Yeah.
   more accurately outline the area that I think is the
11
12
   rocky slope.
        So I believe the outlet to be roughly in this area.
13
    (Indicating) I do PIS mapping and if I produced a
14
15
   product like that and tried to claim an area or a
16
   distance, I'd probably get fired. So that is a rough
   approximation of where that rocky slope is.
17
18
        Okay. If we zoom out at this time, I think we can
    determine approximately how -- well, it didn't go with
19
20
   us.
        Okay.
21
        Did you study the biofilter berm construction at
22
   all?
         I observed -- you mean during construction?
23
24
        Yes.
    Q
25
        No, I did not.
    Α
```

Did you observe it after construction, after it was 1 2 built? I was there on a number of occasions and saw the 3 4 berm after it was built, after it was vegetated with 5 grass, yes. 6 How wide is the berm at the top? 7 Maybe 10, 12 feet. 8 And how long -- how high is the berm above the 9 ground surrounding it? 10 Maybe eight feet. That's a rough guess. You're asking -- I'm not even sure it's appropriate for me to 11 12 be making guesses based on a visual, no measurements, 13 but recollection of my observation several years ago. 14 So we agree that you took no measurements about the berm; correct? 15 16 That is correct. And you took no measurements from the lip of the 17 18 berm to the lowest part of the wetland depicted in JE 1024? 19 20 That is correct. 21 Did you take any tests regarding the level of the 22 groundwater in the area east of the biofilter? 23 There's some monitoring wells maintained by 24 Flambeau Mining Company that looked at the groundwater 25 level, but I have not done any tests which would involve

```
drilling wells and things.
 1
 2
        And is there a well that you're aware of that
 3
   reports the groundwater level to the east of the
 4
   biofilter?
 5
       I believe there's a groundwater well quite a ways
 6
   to the east, and at this point I wouldn't be able to
 7
   identify its exact location. But my guess is several
 8
   hundred feet away, at least.
 9
        You would agree though that the -- that nothing you
10
   did took into account the level of the groundwater to
   the east of the biofilter; correct?
11
12
        My observations did not take into account
13
   groundwater level.
14
        Okay. So it's true, is it not, that on the
   occasions that you claim you saw water going out through
16
   the biofilter outlet, that you took no measurements of
   the amount of that flow; correct?
17
        That is correct.
18
   Α
        What, if any, tests did you perform when you claim
19
20
   you saw water coming out of the biofilter to determine
21
   where that water went?
22
            MS. MCGILLIVAY: Objection. Asked and
23
   answered.
24
            THE COURT: Sustained.
25
   BY MR. VAN CAMP:
```

```
Do you know what the construction of the biofilter
 1
 2
   outlet is?
 3
         By that you mean the materials?
 4
 5
         I know at the surface there's some large rocks,
 6
   presumably I assume to prevent erosion due to flow.
 7
   don't know the detail of the materials used for the
 8
   construction, no.
 9
         Do you know what's under those rocks?
         I do not.
10
   Α
        Is it dirt?
11
             MS. MCGILLIVAY: Objection. Foundation.
12
13
             THE COURT: Sustained.
14
             MR. VAN CAMP: Okay.
   BY MR. VAN CAMP:
15
16
         If a drop of water came out of that biofilter, what
17
   would happen to it?
18
         Sounds like a very hypothetical question. A drop
    of water exited the biofilter in what direction?
19
20
    Q
         Out of the outlet.
         Out of the outlet. It would tend to flow downhill.
21
   Α
22
                It might infiltrate into the dirt?
    Q
23
         A drop of water could infiltrate into the dirt.
24
         Might evaporate?
    Q
25
         It might evaporate.
   Α
                     JOHN COLEMAN - CROSS
```

```
The area of the biofilter outlet is choked with
 1
 2
   plants; correct?
         I don't think I would use the term choked. There's
 3
 4
    some -- there are some plants growing in that outlet as
 5
   could be seen in the photographs I took.
 6
         That drop of water could be taken up by a plant?
 7
        A drop of water could be taken up by a plant, yes.
 8
         What about two drops of water? Same things would
 9
   happen; correct?
10
         I'm not a plant physiologist, so how much water a
   plant can absorb over a certain period of time I'm not
11
12
   qualified to answer that. I don't know. And plus, is
   that over two weeks or is that over five minutes? I
13
14
    would say a plant probably could not take up two drops
   of water in five minutes, but there are a lot of
15
16
   qualifiers. You need to be more explicit, I guess, in
17
   my mind.
18
        What studies did you do about any of those
19
    qualifiers?
20
         I did no studies other than observing the outlet.
21
         So basically all you can tell this Court is about
22
   the days that you observed it.
23
         That is correct.
24
         You would agree also, wouldn't you, that the volume
25
    of outflow from the biofilter would impact where it
```

```
goes?
 1
 2
        I would say the volume of water might impact on how
   that water was partitioned to different fates.
 3
 4
        Are you aware of any studies done regarding the
 5
   volume of outflow from the biofilter?
 6
   Α
        No, I am not.
 7
        Are you aware of any studies indicating how many
 8
   days in any year there was a flow out of the biofilter?
 9
             MS. MCGILLIVAY: Objection. Asked and
10
   answered.
11
             THE COURT: Overruled.
12
             THE WITNESS: Can you repeat the question?
   BY MR. VAN CAMP:
13
14
        Are you aware of any studies indicating how many
   days in any year there was a flow out of the biofilter?
16
        The only studies I'm aware of, there were water
   samples taken by Flambeau Mining Company at the outlet.
17
   And as explicit studies as to flow, I'm not aware of any
18
    studies from the outlet.
19
20
        Are you aware of any studies indicating how many
21
   days there is water standing in the wetland east of the
22
   biofilter?
23
        No.
24
             MS. MCGILLIVAY: Objection. Foundation.
25
         I'm not aware.
   Α
                     JOHN COLEMAN - CROSS
```

```
Are you aware of any studies --
   Q
 1
 2
             THE COURT: Overruled.
 3
             MR. VAN CAMP: I'm sorry.
 4
   BY MR. VAN CAMP:
 5
         Are you aware of any studies of surface water
   movement within the wetland east of the biofilter?
 6
 7
         By surface water movement in that area, do you mean
 8
   flow direction, flow quantity, things like that?
 9
    Q
         Right.
10
         No. I'm not aware of any study of that sort.
         Are you aware of any experiments conducted by
11
12
   anybody to determine the direction of flow of anything
13
   coming out of the biofilter?
         Studies to determine the direction of flow --
14
    Α
15
         Correct.
16
         -- of water coming out of the biofilter?
                                                    I mean,
   well, if the water is flowing downhill, so I don't think
17
   there was a need for a study of that sort. But a study,
18
   other than knowing that water flows downhill, no, there
19
20
    was -- as far as I know there was no study.
21
         Well, you said that there are big rocks at the
22
   biofilter outlet; correct?
         Big in that, you know, size of a half loaf of bread
23
24
   maybe, a loaf of bread.
25
         The water would have to go around those; correct?
                     JOHN COLEMAN - CROSS
```

A Yes.

Q Do those rocks direct the water to the north?

A You're talking about as the water is flowing around this loaf, half-loaf sized rock, whether some of that water might have gone around to the left side and some gone around to the right side and the left side being to the north. Yes, that could have happened.

Q And then there are rocks below that, correct, that would again direct the water?

A Scattered rocks. I think I'd be hard pressed to agree that scattered rocks are going to generally direct the water. The water will flow around the rocks and momentarily will go in some other direction rather than to the east. But I couldn't testify that the rocks were having any kind of significant impact on the general flow direction at that outlet. I couldn't say that.

Q Okay. Are you aware of any tests done on invertebrates within the marsh to the east of the biofilter?

A No, I am not.

Q Are you aware of any tests done regarding fish in the wetland to the east of the biofilter?

A By tests you mean electroshocking or netting of fish to look at populations or something of that sort?

Q Right.

A The only study I'm aware of that looked at -- well, one study I'm aware of that looked at biotin in Stream C, I think it was done about the time of the DNR -- the visit, there was a report done looking at biotin in Stream C, but I don't recall that it looked explicitly in that area immediately adjacent to the biofilter outlet.

- Q Are you speaking of the water quality assessment that Mr. Roesler participated in?
- 10 A Can you give me the date of that?
- 11 Q 2012.

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- A No. I'm talking about a study done back in -- it must have been around 2004/2005.
- Q Okay. But you don't believe that the study was done in the wetland to the east of the biofilter?
  - A I'm not aware that it was. I couldn't testify one way or the other. It's been, you know, a long time since I looked at that study.
  - Q Okay. Are you aware of any tests or experiments involving insects in that wetland to the east of the biofilter?
- 22 A No, I'm not.
- Q Are you aware of any tests comparing biological matter between the biofilter and the wetland to the east of it?

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Can you define what you mean by biological matter? Α You mean living organisms or are you talking about carbon particles or --Let's begin with living creatures. Between the biofilter and the area to the east of it, no, I'm not. What about any dissolved organic carbon studies between the wetland and the biofilter? No, I'm not. Α Are you aware of any other plant studies between the biofilter and the wetland to the east of it? Α No. Are you aware of any tests related to those same things between the wetland to the east of the biofilter and Stream C south of Copper Park Lane? Any tests that looked at the -- can you repeat the question, please. Certainly. Are you aware of any tests that compare the biological matter? And we'll begin with living matter between the wetland east of the biofilter and Copper Park Lane south -- I'm sorry, Stream C south of Copper Park Lane. Well, my understanding -- I mean there are wetland studies dealing in wetlands and looking at wetland vegetation that occurred in both those areas.

Relative --1 Q 2 But are you talking about individual aquatic 3 organisms or are you talking --4 Well, we'll take you through that. Are you aware 5 of any studies that study the living creatures in the 6 wetland east of the biofilter and compare them with 7 water in Stream C south of Copper Park Lane? 8 Α Compare the organisms with the water in Stream C --I still -- are you talking about the aquatic organisms 9 10 then in that area that you're calling the wetland and farther down at Copper Park Lane? I'm not aware of any 11 12 aquatic organisms there. As I said, there are wetland 13 plants that occurred in both areas. If you're talking about the chemistry of those 14 15 organisms, that's maybe a different question. 16 Let's break it down further. Are you aware of any study of fish in the wetland and compare that to the 17 fish in Stream C --18 19 Α No --20 -- south. 21 No. I'm not aware of any. Α 22 Are you aware of any studies conducted of 23 macroinvertebrates in the wetland and compare that to 24 the macroinvertebrates in Stream C south of Copper Park 25 Lane?

I'm not aware. Α No. 1 2 Are you aware of any samples of dissolved organic 3 matter taken in the wetland to the east of the 4 biofilter? 5 No, I am not. Α 6 Are you aware of any tests that compare dissolved 7 organic matter from the wetland east of the biofilter to 8 dissolved organic matter in Stream C south of Copper 9 Park Lane? 10 No, I am not. Are you aware of any studies at all that were --11 12 that attempt to determine what is going on in the broadest sense within the wetland to the east of the 13 biofilter? 14 15 MS. MCGILLIVAY: Objection. Vaque. 16 THE COURT: Sustained. BY MR. VAN CAMP: 17 18 Well, are you aware of any tests that determine 19 whether the biofilter to the -- I'm sorry, the wetland 20 to the east of the biofilter adds silt to the flow leaving it or takes silt out? 21 22 No, I am not aware of any study of that sort. 23 Are you aware of any studies that determine whether 24 the wetland to the east of the biofilter adds or 25 subtracts copper to water south of Stream C? JOHN COLEMAN - CROSS

A No, I am not.

Q Are you aware of any tests that determine whether or not the biofilter adds or subtracts zinc to the water south of Copper Park Lane?

A I think you asked if the biofilter add or subtract and I would say yes.

- Q I'm sorry, let me look at my question.
- A The biofilter was designed to remove copper and other things from the stormwater.
- Q Right. I misspoke in my question. Are you aware of any tests that determine whether or not the wetland that's to the east of the biofilter adds or subtracts zinc to the water south of Copper Park Lane?
- 14 A I am not.
  - Q You indicated that on at least two occasions you walked Stream C from Copper Park Lane to the Flambeau River; correct?
  - A Large portions of it, yes.
- 19 Q When you say *large portions of it*, why don't you 20 tell us what portions you didn't walk.
  - A Well, I walked on one occasion, walked the entire length. I think that was the trip with the DNR, we walked the entire length of Stream C. On another trip, we walked substantial portions of the stream but were not on the stream bank the entire time. So at times we JOHN COLEMAN CROSS

were maybe 30, 40, 50 -- 30 or 40 feet away from the stream.

- Q You indicated that on one of those occasions there were portions of Stream C that didn't have any flow.
- A The flow appeared to disappear into the gravel for short periods of -- short distances, distances of maybe five or ten feet, yes.
- Q Okay. And in those -- on those or that occasion that you saw that, you would agree that the water infiltrated into the ground at those locations.
- A You're asking a question that's -- stream hydrology is very complicated with exchange between streambed and stream quite complicated. Infiltration to -- usually means something more substantial than very temporary exchange with the gravels. I would -- I would not necessarily call it infiltration of the stream at that point and I think that implies maybe a deeper infiltration than what I observed, which seemed to be rather shallow into the gravels.

But yes, I would say it infiltrated into the gravels in the streambed. Exactly how far it infiltrated it's hard to know, but it re-emerged after the gravel portions of the stream, yes.

Q Okay. In those instances when it infiltrated, we'll say into the gravel as you suggest, it was below JOHN COLEMAN - CROSS

```
grade; correct?
 1
 2
         That is correct, yes.
   Α
 3
         So there wasn't surface flow at that location?
 4
         There was not.
 5
         And you've indicated that that hydrology is very
 6
    complicated; correct?
 7
         That can be with water flowing in and out of the
 8
    streambed gravel, yes.
 9
         Are you aware of anyone that has done a study to
10
   determine whether or not water from the biofilter passed
    those locations or did that infiltrate into the soil as
11
   well?
12
             MS. MCGILLIVAY: Objection, Your Honor. It's
13
14
    calling for expert opinion that this witness has not
15
   prepared definitive --
16
             THE COURT: Sustained.
             MR. VAN CAMP: I'll accept that.
17
             THE COURT: Yes.
18
19
             MR. VAN CAMP: No, I meant that he doesn't.
20
   apologies, Your Honor.
21
   BY MR. VAN CAMP:
22
         Are you aware of any studies that have been done
23
   about that?
24
         Can you describe -- I'm a little puzzled on what
25
    you're describing. Can you describe the scenario you're
                     JOHN COLEMAN - CROSS
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talking about?

- Q I am asking you if in your studies about Stream C you have come across any studies related to the phenomenon where water seems to go into the ground in Stream C. Have you seen any studies about that?
- A No. This earlier study from 2005 I think talked about some aspects of the flow of Stream C, but the details of that I can't recall at this point. I think that was trying to do a general characterization of Stream C, so that would be the only work that I know of and I think it was rather cursory.
- Q I'd like to -- if we could, please, take a look at Exhibit 74. I believe you indicated that Exhibit 74 is a photograph that you took. Which direction are you facing?
- A I'm facing to the north/northwest.
- Q There was a suggestion in a question you were asked as to whether or not this photograph shows the biofilter outlet. It does not show the biofilter outlet, does it?
- 20 A It does not.
- Q It does show, however, grasses and other plants surrounding the biofilter?
  - A That is correct.
- Q And grasses and plants continue around to the right side of this photograph and on the swale of the other JOHN COLEMAN CROSS

```
part of the biofilter; correct?
 1
 2
        I want to be careful. The use of the term swale is
 3
   maybe --
 4
         I'm sorry.
 5
         You mean the outlet?
   Α
 6
         No, I'm sorry. You're correct. Let me restate the
 7
    question. The grasses that appear in Exhibit 74
 8
    continue around the berm is what I meant, not the swale,
   but the berm as it continues around off to the right of
 9
10
   this --
        Yes.
11
   Α
         -- photograph. And this photograph I believe you
12
13
    indicated was taken in June; correct?
14
   Α
        Yes.
15
         How tall do those grasses get later in the year?
16
         Oh, my guess is about twice the current height.
17
   But I didn't measure them. But, yes.
         So what is the current height in Exhibit 74?
18
         Well, my guess is, you know, maybe average height
19
20
   of ten inches.
21
         Are you standing on Copper Park Lane when you took
22
   Exhibit 74?
23
         I'm standing at the edge on the slope coming down
24
   from Copper Park Lane.
25
         You're standing below the berm outside the
                     JOHN COLEMAN - CROSS
```

biofilter; correct?

- A Well, I think I'm actually a little bit elevated above. My feet are below the berm, yes.
- Q And when you say you're *elevated above*, what are you elevated --
- A Obviously from my photograph I had to be high enough to see the water. If my head was lower than the top of the berm, I wouldn't be able to see the water here. So I think I was probably up on the bank of Copper Park Lane to give me a little bit of vantage to see the biofilter.
- Q Would you say that Exhibit 74 exhibits the height of the berm around the biofilter?
- A I don't think that's the maximum height, but on the right-hand side there that's getting probably close. I think that is close to the southeast corner of the biofilter, but I think it and the berm is a little bit higher off to the right of the photo.
- Q So how high is the berm that we're looking at in 74?
- A You know, I'd be reluctant to hazard a guess based on memory and the photo. I think you can probably make as good a guess as I can.
- Q So you don't know.
- 25 A I'll say it's more than four feet and less than JOHN COLEMAN CROSS

ten. 1 2 Okay. And in the area where the outlet is, it's 3 lower than the berm pictured here; correct? 4 The elevation of the outlet is just about the 5 elevation of the water, so yes, the elevation of the 6 outlet is lower than the berm height here. 7 How high is the height of the biofilter outlet 8 above the grassy slope to the east of the outlet? 9 Once again you'd be asking me to speculate. I Α 10 would say more than three feet and less than six. Okay. Could we take a look then at Exhibit 76, if 11 12 you don't mind. Exhibit 76 is also a photograph that 13 you took; correct? 14 Α Yes. 15 And I believe it was taken on the same day as 16 Exhibit 74? 17 Α Yes. Which direction are you facing in Exhibit 76? 18 Facing to the east, a little bit to the north. 19 20 Now are you standing on the top of the biofilter? 21 I'm --Α 22 On the biofilter berm? 23 No. I'm standing in the outlet on a couple of 24 these rocks that you can see in the photograph. 25 How far from the north corner of the biofilter are JOHN COLEMAN - CROSS

```
1
   you when you take the photograph that's Exhibit 76?
 2
        How far from the northeast corner?
   Α
 3
         Correct.
    0
 4
        Maybe 40/50 feet. But again, you're asking me to
 5
   recall a distance from quite a few years ago. But I
 6
   think if you really want to know the distance, I think
 7
   the map would show you better than my recollection from
    2004.
 8
 9
        Okay. Now I believe you indicated that you thought
10
   that Stream C, as you described it, flowed through the
   grass in this photograph.
11
12
   Α
        Yes.
13
        Is that correct?
       Yes. That is correct.
14
   Α
15
        How far away do you believe that is?
16
            MS. MCGILLIVAY: Objection. Vague.
         Okay. How far is it from the water that we see in
17
   Exhibit 76 to the place where you believe Stream C would
18
   be?
19
20
         I think very approximately about ten feet.
         Okay. So if we were to look at Exhibit 1024 and we
21
22
   looked at the scale in Exhibit 1024, from the lip of the
23
   biofilter -- from the lip of the highest point?
24
         Okay. The highest point? Yes.
   Α
25
         Of the outlet.
                     JOHN COLEMAN - CROSS
```

```
Α
         Yes.
 1
 2
         From the highest point of the outlet to the lowest
 3
   part of the wetland to the east, how many feet are we
 4
   talking about?
 5
         I'd say 40 or 50 feet.
   Α
 6
         So in your declaration when you referred to Stream
 7
   C being ten feet away from the biofilter outlet --
 8
   Α
         Yes.
 9
         -- you're basically saying that the biofilter
10
   outlet is 40 or 50 feet wide; correct?
         No. I'm saying it's 30 to 40 feet.
11
12
         So you are saying that the biofilter outlet, which
   you've said is three to six feet high, has a biofilter
13
   outlet that is 30 or 40 feet wide?
14
         It's a very gradual slope going out. Yes, I would
15
16
   say it's something like that.
         And all of that slope is covered with rock?
17
18
         Well, you can see in the photographs there's some
   rock. There's now some mixed dead vegetation in there.
19
20
    There's probably soil underneath that, yes.
21
         So at the point that we are looking at Exhibit 76,
22
   and there is water there, how far is that water that we
23
    see in Exhibit 76 from the highest point of the
24
   biofilter outlet?
25
        I'd say 20/25 feet. 20 feet my guess.
   Α
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```
And as I look at this photograph, I don't see any
 1
 2
   flow.
        Well, I think it would be very difficult to see.
 3
 4
    I've tried -- it's almost impossible to get a still
 5
   photograph of flow. I've gone to video camera, a video
 6
    camera for exactly that reason.
 7
        Could we take a look, please, at Exhibit 76 -- I'm
 8
    sorry, at 80.
 9
             MS. MCGILLIVAY: I'm sorry, I didn't hear you.
             MR. VAN CAMP: I'm sorry. Exhibit 80.
10
         When you testified about Exhibit 80, I believe you
11
12
    said you were standing on rocks in the biofilter?
13
    Α
         Yeah. I think that is the case, yes.
14
         So you are standing on a rock in the biofilter when
   you're taking this photograph?
15
16
   Α
         Yes.
        Which way are you facing?
17
         In this photo I'm facing east/northeast. The
18
   biofilter would be to the left of this picture.
19
20
         Okay. So then if we look at Exhibit 81, please.
21
    Sorry about this. Are you simply turning around and
22
   taking a photograph a different direction than you were
23
   when you were at Exhibit 80?
24
        Pretty close to that. I think I may have moved a
25
    very small amount, but essentially I'm just doing kind
                     JOHN COLEMAN - CROSS
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```
1
   of a panorama here.
 2
         Okay. So you testified that Exhibit 81 showed the,
 3
    I think, northeast corner of the biofilter in the upper
 4
    left-hand corner; correct?
 5
         In this photo?
   Α
 6
    Q
         Yes.
 7
    Α
         Yes.
         And do you see any water flowing in Exhibit 81?
 8
 9
         As I said, you can't see flowing water in still
   Α
10
   photographs. I saw flowing water when I was at the
11
   site.
12
        Well, you would agree that the water in the upper
    left-hand corner is not flowing, it is in the biofilter;
13
14
    correct?
         Well, it's mostly still water, but water moves even
15
16
   when it's in a pond or in a lake, so it may be moving.
    It's not the sort of thing you could hope to detect in a
17
   photograph and if it's -- in this upper left-hand corner
18
   you wouldn't be able to detect that by sight either.
19
20
   But when it passes past my feet where I was standing, I
21
   could see water moving through the outlet.
22
         So to see water moving through that outlet, you had
   to be actually standing right where you are; correct?
23
24
         I don't know if I had to be standing right where I
25
                              I mean in some of the earlier
    was to see any movement.
                     JOHN COLEMAN - CROSS
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photos you can see the vegetation is bent because of the flow of the water. There's been dead vegetation that's been moved by flowing water. But I took the photo from this location because I thought it -- particularly because the grass was starting to obscure things, that it was important to be close to the outlet to get a good picture, so I stood right there. Whether I could have seen flow if I was back another 10/20 feet, at this point it would be speculation, I think, on my part. Do you see in photograph 81 any of the bent-over grass? No, I don't. I saw it in one of the earlier photos. From the point that your camera is focused on in Exhibit 81, it would be downhill over the edge of the biofilter outlet; correct? Downhill would be to the bottom right? Is that --Α Q Right. Α Yes. Q Correct? That is correct. Α Do you have any photograph showing water flowing down that area? The previous photographs were of that area. Α

Could we go back to 76, please.

JOHN COLEMAN - CROSS

Where is the slope

```
that you referred to on the biofilter outlet in Exhibit
 1
 2
    76?
 3
        This is the outlet sloping from the left-hand side
 4
   of the photograph to the right-hand side of the
 5
   photograph.
 6
       You also referenced a channel to the east of the
 7
   biofilter outlet. Do you have any photographs to show
 8
   that channel?
 9
        No, I do not.
   Α
10
        That's because it's a grassy swale; correct?
        The grass was tall enough that you really couldn't
11
12
   see the topography of the ground at this point. I mean
   there is a photograph here that shows that area, but the
13
   grass is tall enough that I'm not going to try to
14
15
   convince people that they can see something that's very
16
   difficult to see with the grass being 10 or 12 inches
17
   tall here.
             THE COURT: We'll take our lunch break now.
18
19
   We'll resume at 1:30.
20
        (Noon recess
                                 12:30 p.m.)
21
22
23
24
25
                     JOHN COLEMAN - CROSS
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I, LYNETTE SWENSON, Certified Realtime and Merit Reporter in and for the State of Wisconsin, certify that the foregoing is a true and accurate record of the proceedings held on the 21st day of May 2012 before the Honorable Barbara B. Crabb, District Judge for the Western District of Wisconsin, in my presence and reduced to writing in accordance with my stenographic notes made at said time and place. Dated this 7th day of September 2012.

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/s/\_\_\_\_

Lynette Swenson, RMR, CRR, CBC

Federal Court Reporter